

CANADA  
DEPARTMENT OF RESOURCES AND DEVELOPMENT

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NATIONAL MUSEUM OF CANADA

BULLETIN No. 129

CATALOGUE OF THE RECENT MOLLUSCA  
OF CANADA

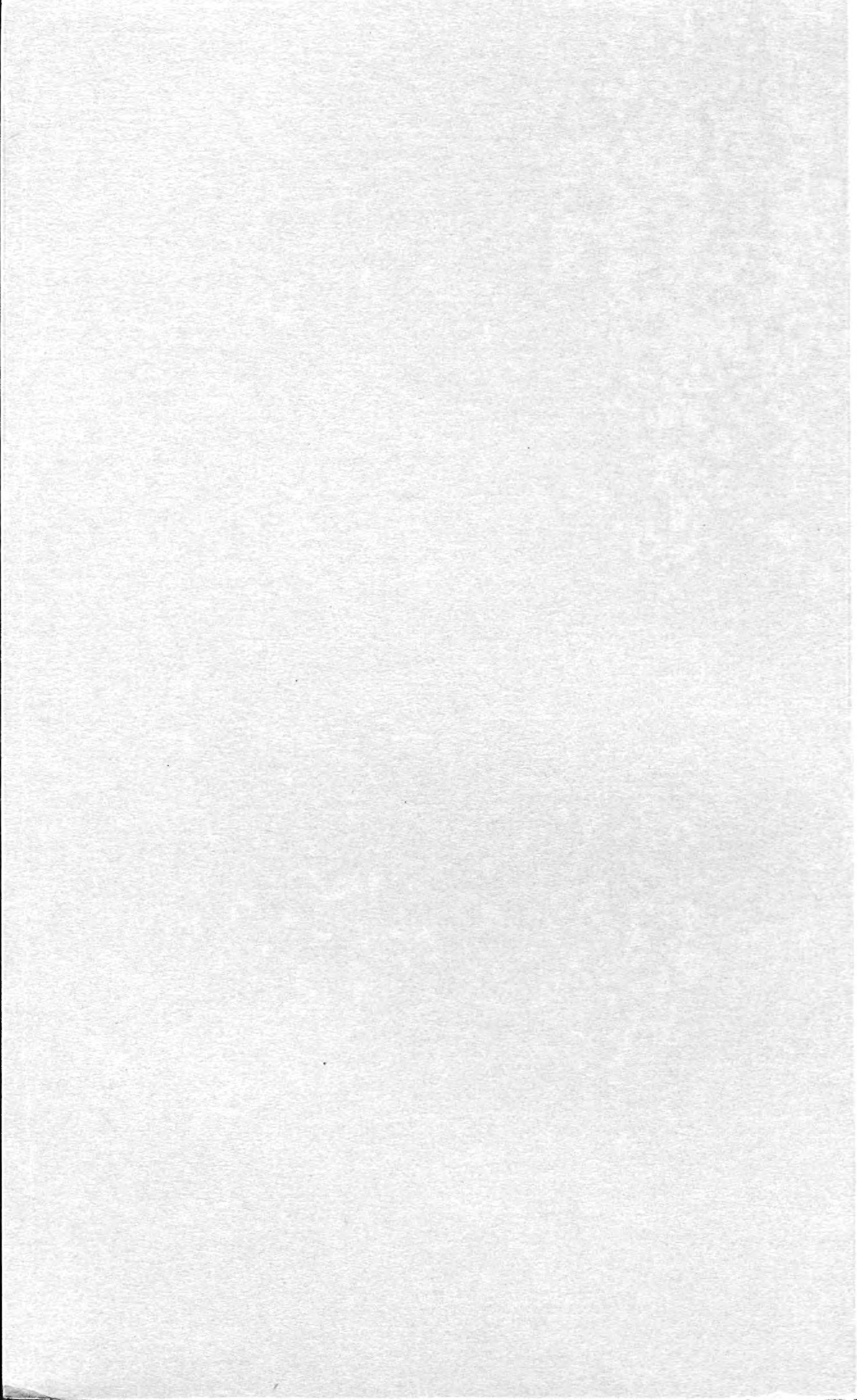
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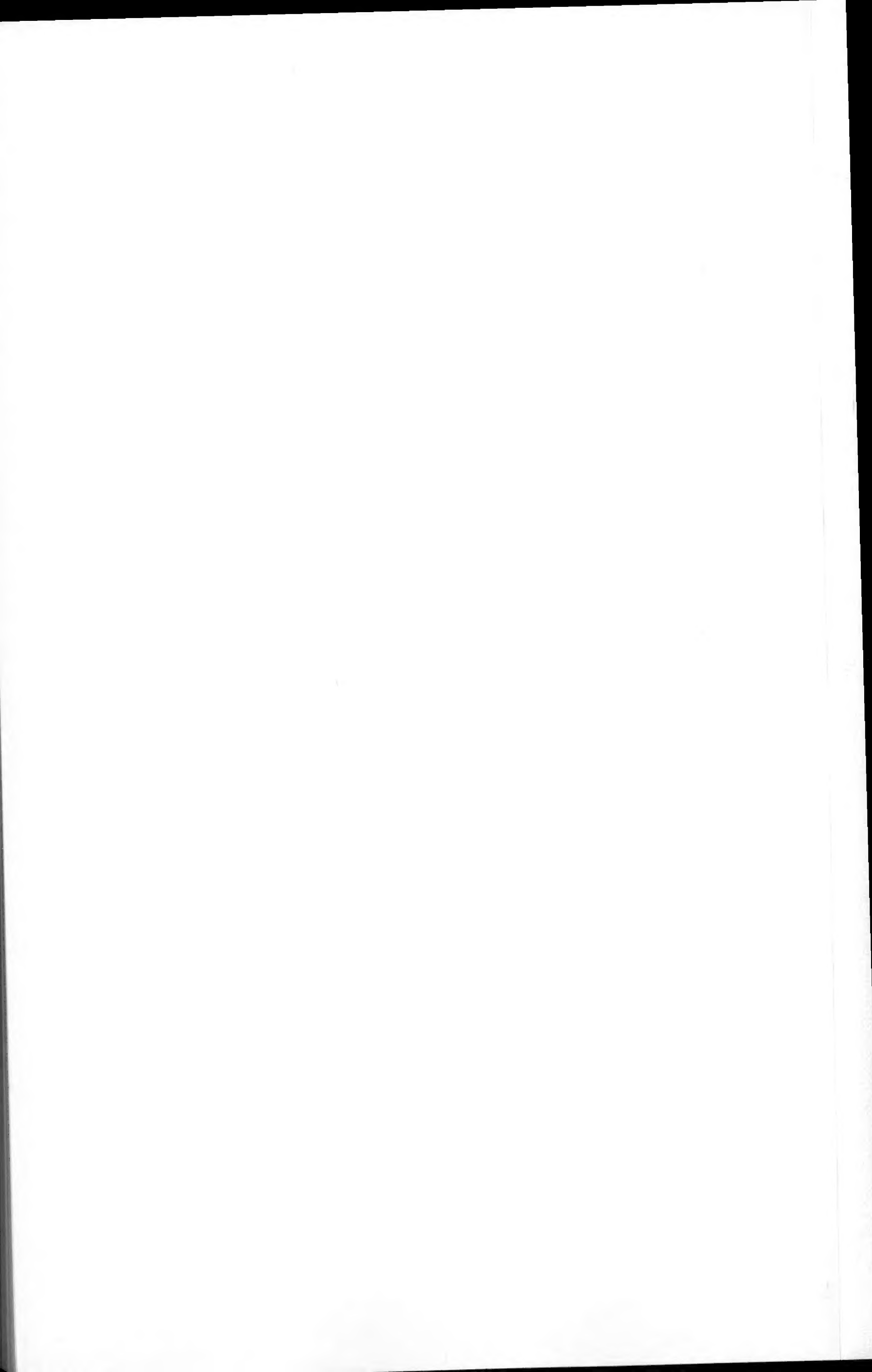
Aurèle La Rocque



1953

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**CANADA**  
**DEPARTMENT OF RESOURCES AND DEVELOPMENT**  
**NATIONAL PARKS BRANCH**

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**OF CANADA**

**BY**  
**Aurèle La Rocque**

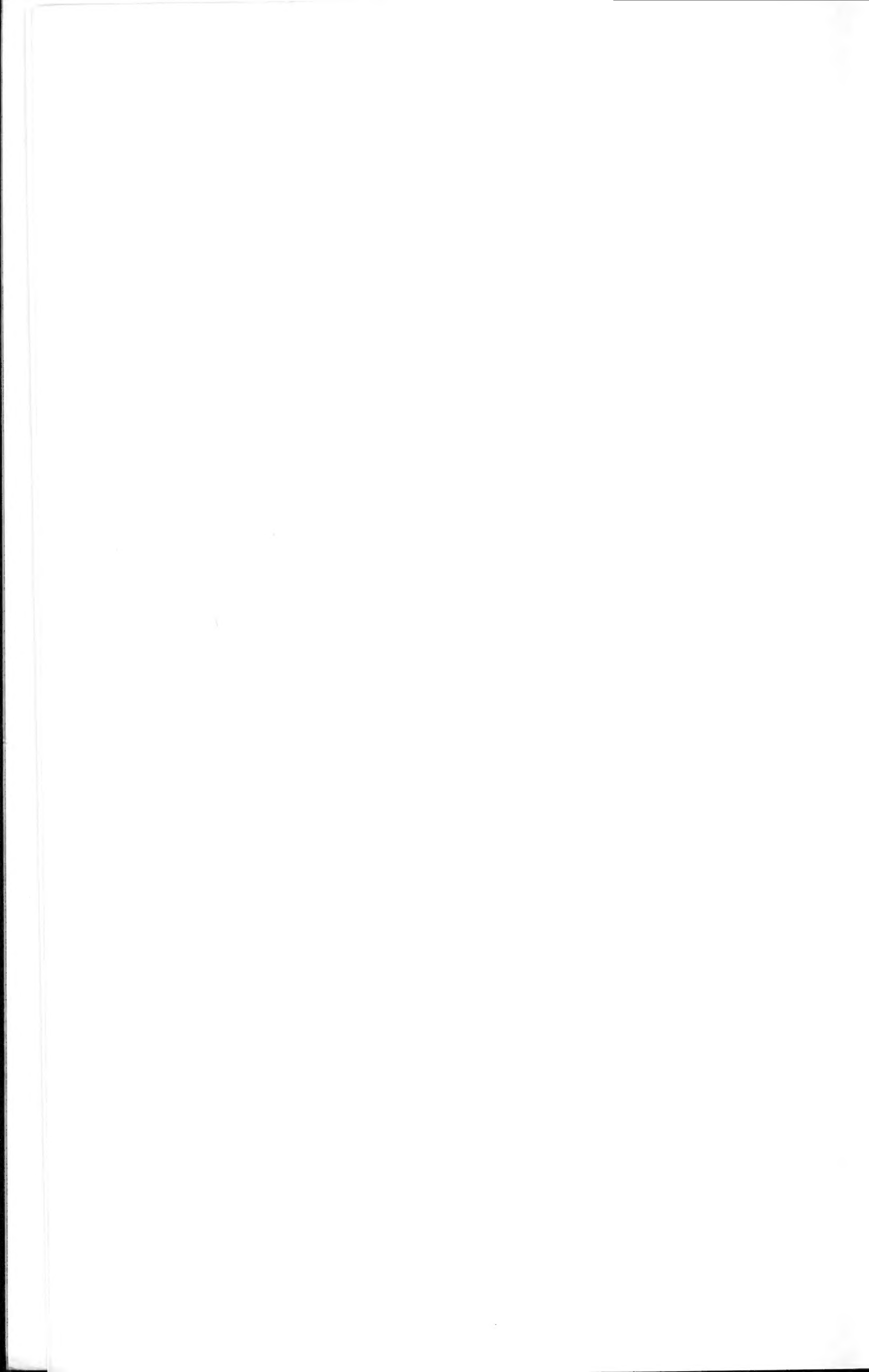
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## FOREWORD

The story of the growth and development of natural history in Canada, the rise of malacology, that branch of zoology which deals with molluscs, has provided a long and colourful chapter. Fashioned in early days from the notes of Samuel de Champlain concerning the shells of Nova Scotia and later put on a more scholarly basis by Thomas Rackett and Thomas Say, malacology reached its greatest extent near the close of the nineteenth century through the researches of Léon Provancher, Sir William Dawson, the Rev. G. W. Taylor, and many other distinguished conchologists.

In 1901, J. F. Whiteaves published a list of molluscan species in his 'Catalogue of the Marine Invertebrates of Eastern Canada', which remains to this day a valuable reference work. During the years following his death, however, interest in Canadian mollusca steadily declined. One of the few Canadian malacologists who has kept alive the spark of this interest and who now champions its revival is the author of the present catalogue.

Since earliest boyhood days Aurèle La Rocque has been filled with a love for natural history. He became interested in the molluscs through observations while on short field trips in the vicinity of his native Ottawa. In 1927 he joined the staff of the Geological Survey of Canada, and while engaged in the preparation of fossil and recent shells for study purposes he became intimately acquainted with the large collections of Canadian molluscs built up by officers of the Geological Survey during the previous eighty years. This collection, consisting of marine, freshwater, and terrestrial species, both recent and fossil, from the east and west coasts of Canada and the Arctic, has now been transferred permanently to the invertebrate division of the National Museum of Canada.

During his twenty-year association with the Geological Survey Dr. La Rocque devoted much time, largely his own, to the collection of molluscs in the Ottawa area, to the study of the Survey and Museum collections, and to the search of literature on Canadian species. He published many of his observations in the *Canadian Field-Naturalist*, the *Nautilus*, and the *Canadian Journal of Research*. His interest in Pleistocene molluscs led him to continue his post-graduate studies at the University of Michigan where he was granted his doctorate in 1948.

In the present catalogue Dr. La Rocque has envisioned the geographical confines of the Dominion of Canada as a natural faunal province. Though essentially boreal in character, it includes the large molluscan fauna of the Arctic as well as many representatives of more southerly climates. The listing of all known species from the diverse ecological habitats of land, sea, and freshwater within this province, and the systematic compilation of references to previous studies of Canadian molluscs have been the task which Dr. La Rocque set for himself in preparing the present volume.

OTTAWA, August 28, 1952

F. J. ALCOCK  
Chief Curator





# CATALOGUE OF THE RECENT MOLLUSCA OF CANADA

## INTRODUCTION

### PURPOSE

The published information on Canadian mollusca is more voluminous than one might suspect. The list of works dealing exclusively with Canadian species would exceed 200 titles, and if the ancillary material were added it would exceed 5,000 titles. Obviously, there is need for a consolidation of this extensive literature; ideally it would take the form of a revision of the entire fauna so that the identification of species might be achieved by reference to a single publication or series of publications. Unfortunately, this would require years of work by more specialists than are now active in the field in Canada. During the preparation of an extensive revision, workers in mollusca would remain without a guide to the available literature. For the present, the writer has thought it best to make available, through the publication of this bulletin, a guide to the literature which he has been compiling for many years. It is hoped that it will stimulate the revision of the molluscan fauna of Canada and serve in its preparation.

The purpose of this catalogue is to give a list of the mollusca found in Canada or in the seas off its coasts, together with the following information on each species: (1) a reference to the original description, (2) other references in which further data on the species may be found, (3) its type locality, (4) its exact range, so far as known. The list of references includes the major works on Canadian mollusca and those on the mollusca of other regions which must be consulted for the identification of our species.

The term "Recent" in the title of this catalogue has been interpreted rather broadly. The few species confined to the Pleistocene have been included, and the Tertiary range of living species, in Canada and elsewhere, is also given. It is hoped that the extension of the catalogue to cover this field will be compensated for by increased usefulness.

### SCOPE

This catalogue is intended to include all species recorded from within the geographic boundaries of Canada. A few species or subspecies may have escaped the thorough search of the literature on which the catalogue is based; if so, the writer regrets their omission and promises to include them in supplements to be published from time to time in the *Canadian Field-Naturalist* to bring the Catalogue up to date as new species are recorded from Canada or their range extended and others deleted from the Canadian list.

The question of what extra-limital species to include is difficult to answer satisfactorily. To limit the catalogue strictly to those species recorded for Canada would have reduced its value considerably since many marine species are found just outside Canadian waters and will most likely be found in them when further collecting is done. All species recorded for Alaskan or Greenland waters may be found sooner or later

in the Arctic Sea or along the Pacific Coast of Canada; they have been included in the catalogue as well as the land and freshwater species recorded close enough to the Canadian border.

#### METHODS

In order to reduce the size of the catalogue without sacrificing its usefulness, the following methods have been used. References to the original description of genera have been omitted, since Neave (1935) has given them. Synonymies are not given in the usual form; they may be found in the references cited for each species; synonyms are listed in the index and referred there to the species under which they fall. References are given in abbreviated form in the text and in full in the Selected Bibliography. The references for each species have been chosen carefully, on the basis of usefulness and availability. Wherever possible, the most recent and most complete works are listed, especially those containing descriptions and illustrations. The type locality could not be ascertained for all the species listed. In some cases this is due to the inaccessibility of the original description; in other cases no type locality has been designated, either by the author of the species or by subsequent workers. The writer has refrained from designating type localities; he feels that this task is best left to specialists in each group who should have all possible freedom in this matter since they are best qualified to decide on the locality most suitable for the purpose. The ranges given have been compiled from the literature and from the writer's identifications. Where the range given in this catalogue differs markedly from that given in previous publications, the reasons for the extension are given under "Remarks" for the species concerned.

#### PREVIOUS WORK

The list which forms the main part of this bulletin was built up by the painstaking work of many students. A few brief notes concerning the more important contributors are herewith presented. References to the publications of these and other workers in this connection known to date are contained in the 'Selected Bibliography' pp. 348-378.

Prior to the nineteenth century a few records of Canadian molluscs had appeared in the notes of Sir Humphrey Gilbert (1573), Champlain (1615), Lescarbot (1609), and other early explorers. In 1822 Thomas Rackett described some freshwater snails, and shortly thereafter Thomas Say described many of the common species of mollusca taken on Long's Expedition to western Canada.

The first resident conchologist and the first (1830) to publish on Canadian shells was Mrs. Sheppard of Quebec. Léon Provancher, the 'Linnaeus of Canada', contributed malacological articles to *Le Naturaliste Canadien* and published two volumes on the Quebec species of cephalopods and gastropods. In Ontario, interest in molluscs has long been centred at Toronto (the Royal Ontario Museum, the University of Toronto, and the Ontario Fisheries Research Laboratory). Lists of Toronto shells were published by Williamson (1861), Nicholson (1872), Brodie (1915), and John Oughton (1945), among others. Shells of the Ottawa area were collected and the species compiled by Billings (1863), Heron (1880), and the late Justice F. R. Latchford (with G. W. Taylor, 1890). Hanham (1890) published on the shells of the Hamilton district.

In the Maritime Provinces, J. R. Willis first recorded the shells of Nova Scotia in 1857 and 1861, and the work was continued by Jones (1877). In 1885 and 1886 T. A. Verkrüzen, a German naturalist, described the results of his dredgings in Nova Scotia and Newfoundland waters. H. F. Bain (1885) and Charles Ives (1907) listed the molluscs of Prince Edward Island. The marine shells of New Brunswick were classified by Ganong (1885), Matthew (1884), and the Rev. Henry W. Winkley (1888). Bailey (1903) wrote about the land snails of New Brunswick, and Nylander (1914) made notes on the distribution and ecology of the St. John River mollusca.

Most notable of the workers in the Prairie Provinces were Dawson (1875), Christie (1885), Nutting (1891), and Hanham (1899). Valuable distributional data on prairie and arctic-Canadian mollusca were given in Dall's Alaska Report (1905). More recently Mozley (1925-37) prepared several papers on the ecology of prairie molluscs, and Cockerell (1936) described the shells of Prince Albert National Park, Saskatchewan.

The well-known marine biologist, the Rev. G. W. Taylor, dredged extensively in the coastal waters of British Columbia, and from 1889 until 1900 he was responsible for more than eighteen conchological papers including a preliminary catalogue of Pacific Coast marines. Newcombe (1893) and Hanham (1911-26) listed other marine shells of the area, and O'Donoghue (1926) worked up the nudibranchs of the Pacific Coast. W. H. Dall and Ida S. Oldroyd described and published information regarding many of the specimens collected by British Columbia and Geological Survey workers.

For knowledge of Arctic mollusca we owe much to the Greenland group—Fabricius (1780), Möller (1842), Mörch (1868), and Posselt (1898); to the Alaska group—von Martens (1872) and Lehnert (1884); and to the monumental works of von Middendorff (1851) on Siberia. In northern Canada, shells have been described from Hudson Bay (Boettger, 1880; and Whiteaves, 1881-1905), from Great Slave Lake (Lea, 1861), from the Klondike (Randolph, 1899), and from many other regions (Sowerby, 1836; and Binney, 1861). Since then, notable contributions have been made by the Canadian Arctic Expedition (1913-18), Whittaker (1924), Goodrich (1933), Richards (1936), and Mozley (1937, 1938).

Sir William Logan, later followed by Robert Bell, G. M. Dawson, Elkanah Billings, and other officers of the Geological Survey, made extensive shell collections during routine work in various parts of Canada. In 1907 John Macoun, assisted by C. H. Young and W. Spreadborough, organized the dredging for marine invertebrates on both the east and the west coasts of Canada, and the mollusc material was studied by Dall and Bartsch of the U.S. National Museum. From 1863 to 1910 J. F. Whiteaves published more than thirty papers on the results of his dredgings in Gaspé Bay and the Gulf of St. Lawrence, the most important being the 'Catalogue' of 1901.

The collections upon which much of the preceding work was based are to be found in various institutions throughout Canada. In addition to those of the National Museum and the Royal Ontario Museum, important shell collections are at the Peter Redpath Museum at Montreal, the Provincial Museum at Victoria, the Atlantic and Pacific Biological Stations of the Fisheries Research Board of Canada, the New Brunswick Museum at Saint John, the Perth Museum, and in Hamilton. Outside

Canada, the main collections are located in Ann Arbor (University of Michigan), Boston (Boston Society of Natural History), Cambridge (Museum of Comparative Zoology, Harvard University), Washington (U.S. National Museum), Philadelphia (Academy of Natural Sciences), Urbana (University of Illinois), Buffalo (Buffalo Museum of Science), New York (American Museum of Natural History), and Pittsburgh (Carnegie Museum).

#### ACKNOWLEDGMENTS

In the preparation of this catalogue the writer has had the co-operation of numerous friends whose help it is a pleasure to acknowledge. He is specially indebted to the late Professor F. C. Baker of the University of Illinois for his constant guidance throughout many years of correspondence, exchange, and discussion of the difficult groups in which he specialized. Dr. Henry van der Schalie of the Museum of Zoology, University of Michigan, has been an ever-ready counsellor and friend, giving unstintingly of his own knowledge, especially of the Naiades, and furthering in many other ways the completion of this catalogue. In this he followed in the footsteps of his predecessor, Calvin Goodrich, whose counsel has been especially valuable on the genera *Goniobasis* and *Pleurocera*. Dr. John Oughton, formerly of the Royal Ontario Museum of Zoology and now of the Ontario Agricultural College, contributed freely of the information accumulated during many years of study; the writer is indebted to him for much distributional data on northern and southwestern Ontario. Dr. Elmer Berry has been most obliging in identifying Amnicolidæ, his specialty, and in supplying data on their distribution. The late Ida S. Oldroyd of Stanford University, California, supplied much comparative material and distributional data on Pacific Coast species. The late Chief Justice Francis R. Latchford was of great assistance by contributing liberally from the records in his unpublished notes and the specimens in his collection, of which many were from localities now entirely barren of mollusca.

The writer is also indebted to the following for special information or specimens: the late Archibald M. Campbell of the Perth Museum, Perth, Ontario; Claude E. Johnson and George E. Fairbairn of Ottawa; Rev. Brother Etienne of Hull, Quebec; the late W. R. McColl of Owen Sound, Ontario; Dr. T. W. M. Cameron, Dr. W. E. Swales, and other members of the staff of the Institute of Parasitology, Macdonald College, Ste. Anne de Bellevue, Quebec; Drs. J. C. Medcof and A. H. Leim of the Atlantic Biological Station; Mrs. H. R. Robertson and the late Clifford L. Blakeslee of Buffalo, New York; Dr. G. Dallas Hanna of the California Academy of Science, San Francisco; and many others who from time to time have contributed specimens to the collections of the National Museum of Canada, Ottawa, or to the writer's personal collection.

Finally, it is a pleasure to acknowledge the co-operation of Dr. E. L. Bousfield, Assistant Curator in the National Museum of Canada, who has carefully read the manuscript and made valuable suggestions for its improvement.

#### ECONOMIC IMPORTANCE

*Human food.* Oysters, scallops, and clams are best known as delicacies among the shell-fish. Edible species of all three are found on both coasts of Canada and are the object of commercially important fisheries.



Depletion of the oyster beds has caused some concern, especially on the east coast, and has led to studies of the oyster in order to find means of repopulating the fishing grounds. Some of the publications embodying the results of these studies are listed under the American Oyster, *Ostrea virginica* Gmelin. References to marine species important as human food will be found in the list of references. See especially Needler (1941) and Sullivan (1948).

Periwinkles are present in numbers on both coasts. They are not so popular in Canada as in England, but they are nevertheless offered for sale as far inland as Ottawa. Abalones (genus *Haliotis*) are found on the west coast but are not so highly prized as the California species, which is the object of a lucrative fishery in that state. The Indians of British Columbia used the local species as food, but it did not constitute an important part of their diet.

Squids and octopi are sometimes sold on the Pacific Coast markets but never in large quantities. They are especially prized by the Chinese and Japanese.

Freshwater clams (Naiades) are large enough to have attracted venturesome experimenters, but they are generally considered insipid if not unpalatable. The Indians of Eastern Canada were less discriminating; huge mounds of discarded shells of river and lake mussels are found in their kitchen middens where they were thrown after their contents had been eaten.

Freshwater snails have the same reputation for insipidity, although the Chinese and Japanese are fond of the meat of two species (*Viviparus japonicus* and *V. malleatus*), which they imported many years ago from Asia and planted in lakes and ponds, especially in British Columbia, where they are still found in great numbers. The Indians of Eastern Canada also used freshwater snails as food, in particular the several species of the genus *Campeloma*.

The larger species of native land snails were also eaten occasionally by the Indians. Several species of European land snails have been imported into this country and reared for the table, but their use has never been widespread, partly because of long-standing aversion, partly because of the high prices they command in restaurants. There are several cases of escape and survival of European species in or near cities which are noted in the catalogue of species.

*Animal and fish food.* Raccoons, muskrats, water birds, and many others feed extensively on snails and clams. In most cases they are not the exclusive item of food, but they do form a large part of their diet. Baker (1916) has shown the importance of molluscan food for various species of fish, especially bottom feeders.

*Water scavengers and purifiers.* The aquatic gastropods, with rare exceptions, are vegetarians or scavengers. They feed on algæ and decaying vegetation but are not averse to feeding on dead animals. They play an important role in keeping the sea bottom or that of lakes and rivers free of decaying material. The Naiades are especially important in clearing the waters of rivers and lakes of small particles of decaying matter. It has been noted that sewage in small quantities is actually beneficial to them and that they thrive in the vicinity of sewage outlets if the volume of the latter is not too great.

*Mother-of-pearl.* This aspect of the economic importance of mollusca is not particularly prominent in Canada. The Indians of British Columbia used the shell of abalones for very effective inlays on wood and other materials. From time to time, freshwater clams have been gathered in eastern Canadian rivers for use in the manufacture of pearl buttons, but this enterprise has never reached the size of the pearl button industry of the Mississippi River basin.

*Harmful species.* Besides the molluscs that may be classed as useful to man, there are others which are harmful, either directly or indirectly. In the age of wooden ships, the most harmful was certainly the shipworm, *Teredo navalis* and related species, whose ravages shortened the life of ship timbers. At present the main danger from the shipworms is to fishing vessels, lobster traps, and floating wooden gear used in the oyster industry. Wharves and pilings also have to be protected against their inroads. The shipworm is a pelecypod, not a worm; it thrives in salt and brackish water but is killed by fresh water. Its ravages have been the object of many investigations in this country as well as in the United States and Europe. Some of these are referred to in the catalogue of species. Marine borers of the Atlantic Coast of Canada have been the object of a special study by M'Gonigle (1925).

Certain slugs and snails are sometimes abundant and destructive enough to be classified as garden pests. Few of our native species are found in this group, for most of them prefer the woods to the open fields and gardens. Most of the garden pests are imported species, the majority of them from Europe, brought to this country with bulbs, roots, seedlings, and shrubs. They are found mostly in the cities and their suburbs, in greenhouses and vegetable gardens. Little can be or is being done to eradicate them, and their range is steadily expanding as new colonies are established by individuals carried about with plants, especially nursery stock. Fortunately, they do not thrive so well in Canada as in the southern states, particularly California, where their ravages cause losses running into hundreds of thousands of dollars and where systematic campaigns for their extermination have to be waged.

Certain gastropods, although not directly harmful, are indirectly so, because of their curious relationship to several kinds of parasitic worms. The worms infest various vertebrates, including domestic cattle, game animals, and man himself. Their life cycle is complex and need not be described here; the important point is that it involves a stage during which the larval worm lives within the living body of a snail. Many excellent detailed studies of such worms have been published, of which two (Swales, 1935; Cameron, 1937) will serve as examples. Until recently, human parasites of this character have been considered peculiar to tropical or subtropical regions. Abbott (1948) and others have pointed out that certain North American snails are closely related to the Asiatic hosts of the human parasites and that one "has been shown to be capable of acting as an intermediate host of Manson's disease." Fortunately, the snail belongs to a group that has no representatives in Canada. Such is not the case with the snails of the genus *Pomatiopsis*, which is closely related to the carrier of Oriental schistosomiasis and can be infected with the disease, although the larval worm has not so far completed its growth in it (Abbott, 1948, p. 333).

## Class AMPHINEURA

## Order Polyplacophora

## Family LEPIDOPLEURIDAE

Genus *Hanleya* Gray 1857

**Hanleya hanleyi** Bean 1844, Suppl. to Thorpe's Brit. Marine Conch., p. 263.

*References.* Verrill, 1882b, p. 534; Johnson, 1915, p. 7; Oldroyd, 1927c, p. 253; Johnson, 1934, p. 12.

*Type Locality.* Scarborough, England.

*Range.* Grand Manan; Stellwagen Bank, Massachusetts Bay, 38 fms.; Plover Bay, Bering Strait, to Monterey, Calif.

**Hanleya mendicaria** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 42.

*References.* Pilsbry, 1892, p. 18; Whiteaves, 1901a, p. 154; Johnson, 1915, p. 7; Johnson, 1934, p. 12.

*Type Locality.* Casco Bay, Maine.

*Range.* Grand Manan; Eastport to Casco Bay, 25 to 30 fms.; Georges Bank.

Genus *Lepidopleurus* Risso 1826

**Lepidopleurus alveolus** Sars 1846, in Lovén, Index Moll. Lit. Scand., p. 27.

*References.* Sars, 1878, p. 110; Verrill, 1882b, p. 534; Pilsbry, 1892, p. 6; Whiteaves, 1901a, p. 154; Johnson, 1915, p. 7; Johnson, 1934, p. 12.

*Type Locality.* "Bohus-Bergen".

*Range.* Gulf of St. Lawrence, 220 fms.; Gulf of Maine, 150 fms.

**Lepidopleurus arcticus** Sars 1878, Moll. Reg. Arct. Norv., p. 112.

*References.* Pilsbry, 1892, p. 5; Johnson, 1934, p. 12.

*Type Locality.* ?

*Range.* Greenland to Finmark, 20 to 100 fms.

**Lepidopleurus asellus** Spengler 1797, Skriv. Nat. Selsk., vol. 4, p. 99.

*References.* Pilsbry, 1892, p. 13; Johnson, 1934, p. 12.

*Type Locality.* ?

*Range.* Greenland to Norway.

**Lepidopleurus cancellatus** Sowerby 1839, Conch. Illus., Chiton, figs. 104, 105.

*References.* Sars, 1878, p. 111; Verrill, 1882b, p. 534; Pilsbry, 1892, p. 3; Whiteaves, 1901a, p. 153; Johnson, 1915, p. 7; Oldroyd, 1927c, p. 246; Johnson, 1934, p. 12.

*Type Locality.* Great Britain.

*Range.* Greenland to the Gulf of Maine, 30 to 100 fms.; Bering Strait to Sitka and Oregon.

**Lepidopleurus carinatus** Dall 1927, Proc. U. S. Nat. Mus., vol. 70, No. 19, p. 11.

*Reference.* Johnson, 1934, p. 12.

*Type Locality.* ?

*Range.* Eastport, Maine; Gulf of Maine, 12 fms.; Georges Bank.

#### Section *Leptochiton* Gray 1847

**Lepidopleurus belknapi** Dall 1878, Proc. U. S. Nat. Mus., vol. 1, p. 1.

*References.* Pilsbry, 1892, p. 7; Oldroyd, 1927c, p. 249.

*Type Locality.* North Pacific Ocean, lat. 53° 8' N., long. 171° 19' W., 1,006 fms.

*Range.* Off the Aleutian Islands; Philippine Islands, 1,050 fms.

**Lepidopleurus internexus** Carpenter 1892, in Pilsbry, H.A., 1892, Man. Conch., vol. 14, p. 12.

*Reference.* Oldroyd, 1927c, p. 247.

*Type Locality.* Santa Barbara, California.

*Range.* Belkoffski, Alaska, to San Diego, California.

**Lepidopleurus luridus** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 556.

*Reference.* Oldroyd, 1927c, p. 249.

*Type Locality.* Panama Bay, Albatross Station 3393, 1,020 fms.

*Range.* Puget Sound, 48 fms. to Panama, 1,270 fms.

**Lepidopleurus mesogonus** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 555.

*Reference.* Oldroyd, 1927c, p. 250.

*Type Locality.* Off the Queen Charlotte Islands; Albatross Station 3342, 1,588 fms.

*Range.* Bering Sea, 688 fms.; Queen Charlotte Islands, 1,588 fms.

#### Family LEPIDochitonidae

#### Genus *Lepidochiton* Gray 1821

**Lepidochiton alba** Linné 1767, Systema Naturae, 12th ed., p. 1107.

*References.* Verrill, 1873, p. 662; Pilsbry, 1892, p. 70; Whiteaves, 1901a, p. 154; Johnson, 1915, p. 9; Oldroyd, 1927c, p. 258; Johnson, 1934, p. 12.

*Type Locality.* Iceland.

*Range.* Arctic Ocean to San Diego, California. Circumboreal. Greenland to Massachusetts Bay, 1 to 337 fms.

**Lepidochiton dentiens** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 145.

*References.* Pilsbry, 1892, p. 73; Oldroyd, 1927c, p. 259.

*Type Locality.* Puget Sound, Washington.

*Range.* Puget Sound to Magdalena Bay and Socorro Islands, Lower California.

**Lepidochiton exarata** Sars 1878, Moll. Reg. Arct. Norv., p. 113.

*References.* Pilsbry, 1892, p. 72; Johnson, 1915, p. 9; Johnson, 1934, p. 12.

*Type Locality.* Bodø ?

*Range.* Norway? Off Martha's Vineyard, 101 to 194 fms. Also Florida, 294 fms.

**Lepidochiton flectens** Carpenter 1864, Suppl. Rept. Brit. Assoc. Adv. Sci., for 1863, p. 649.

*References.* Pilsbry, 1892, p. 75; Oldroyd, 1927c, p. 260; Chace and Chace, 1933, p. 124.

*Type Locality.* Puget Sound.

*Range.* Vancouver Island, British Columbia, to San Diego, California.

**Lepidochiton sharpei** Pilsbry 1896, Nautilus, vol. 10, p. 50.

*Reference.* Oldroyd, 1927c, p. 258.

*Type Locality.* Unalaska, Alaska.

*Range.* Unalaska, Aleutian Islands. Possible for northern British Columbia.

#### Section *Cyanoplax* Pilsbry 1892

**Lepidochiton hartwegii hartwegii** Carpenter 1855, Proc. Zool. Soc. London, 1855, p. 231.

*References.* Pilsbry, 1892, p. 45; Pilsbry, 1894, p. 45; Oldroyd, 1927c, p. 260.

*Type Locality.* Monterey, California.

*Range.* Forrester Island, Alaska, to Gulf of California.

**Lepidochiton hartwegii nuttalli** Carpenter 1855, Proc. Zool. Soc. London, 1855, p. 231.

*References.* Pilsbry, 1892, p. 46; Oldroyd, 1927c, p. 261.

*Type Locality.* Monterey, California.

*Range.* Straits of Juan de Fuca to Turtle Bay, Lower California.

**Lepidochiton raymondi** Pilsbry 1894, Nautilus, vol. 8, p. 46.

*References.* Oldroyd, 1927c, p. 262; Chace and Chace, 1933, p. 123.

*Type Locality.* San Francisco, California.

*Range.* Seward, Alaska, to San Pedro, California.

Subgenus *Spongioradsia* Pilsbry 1893

**Lepidochiton aleutica** Dall 1878, Proc. U. S. Nat. Mus., vol. 1, p. 1.

*References.* Pilsbry, 1892, p. 84; Pilsbry, 1893, p. 65; Oldroyd, 1927c, p. 263.

*Type Locality.* Western Aleutians.

*Range.* Aleutian Islands, Alaska. Possible for northern British Columbia.

Subgenus *Tonicella* Carpenter 1873

**Lepidochiton blaneyi** Dall 1905, Proc. Biol. Soc. Wash., vol. 18, p. 203 or 204.

*References.* Johnson, 1915, p. 9; 1934, p. 12.

*Type Locality.* Frenchman's Bay, off Ironbound Island, Maine, 20 fms.

*Range.* Known only from the type locality. Possible for Bay of Fundy, Nova Scotia and New Brunswick.

**Lepidochiton lineata** Wood 1815, General Conchology, p. 15.

*References.* Oldroyd, 1927c, p. 255; Chace and Chace, 1933, p. 123.

*Type Locality.* ?

*Range.* Okhotsk Sea; Japan; Aleutian Islands to San Diego, California.

**Lepidochiton marmorea marmorea** Fabricius 1780, Fauna Grönlandica, p. 420.

*References.* Verrill, 1873, p. 662; Sars, 1878, p. 116; Pilsbry, 1892, p. 41; Whiteaves, 1901a, p. 154; Johnson, 1915, p. 8; Oldroyd, 1927c, p. 254; Johnson, 1934, p. 12.

*Type Locality.* Greenland?

*Range.* Circumboreal. Arctic and Bering Seas; Aleutian Islands south to Forrester Island, Alaska; Japan; Greenland to Massachusetts Bay, 1 to 50 fms.

**Lepidochiton marmorea caerulea** Winkley 1894, Nautilus, vol. 8, p. 78.

*References.* Johnson, 1915, p. 8; 1934, p. 12.

*Type Locality.* Eastport, Maine.

*Range.* Known only from the type locality. Possible for Bay of Fundy, Nova Scotia and New Brunswick.

**Lepidochiton ruber ruber** Linné 1767, Systema Naturae, 12th ed., p. 1107.

*References.* Verrill, 1873, p. 662; Sars, 1878, p. 116; Pilsbry, 1892, p. 80; Whiteaves, 1901a, p. 154; Johnson, 1915, p. 9; 1934, p. 13.

*Type Locality.* ?

*Range.* Circumboreal; Labrador south to Connecticut, 1 to 80 fms. Arctic Ocean to Monterey, California.



**Lepidochiton ruber index** Balch 1906, Nautilus vol. 20, p. 66.

*References.* Johnson, 1915, p. 10; Johnson, 1934, p. 13.

*Type Locality.* Blue Hill Bay, Maine, 12 fms.

*Range.* Known only from the type locality. Possible for Bay of Fundy, Nova Scotia and New Brunswick.

**Lepidochiton saccharina** Dall 1878, Proc. U. S. Nat. Mus., vol. 1, p. 2.

*References.* Pilsbry, 1892, p. 44; Oldroyd, 1927c, p. 256.

*Type Locality.* Aleutian Islands.

*Range.* Pribilof, Bering, and Aleutian Islands, in shallow water; San Diego, California, 101 fms.

**Lepidochiton sitkensis** Middendorff 1846, Bull. Imp. Acad. Sci. St. Petersburg., vol. 4, p. 121.

*References.* Pilsbry, 1892, p. 44; Oldroyd, 1927c, p. 257.

*Type Locality.* Sitka Island, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Lepidochiton submarmorea** Middendorff 1848, Bull. Imp. Acad. Sci. St. Petersburg., vol. 6, p. 120.

*References.* Pilsbry, 1892, p. 42; Oldroyd, 1927c, p. 255.

*Type Locality.* ?

*Range.* Aleutian Islands to Puget Sound; also Okhotsk Sea and Japan.

#### Genus *Nuttallina* Carpenter 1873

**Nuttallina californica** Reeve 1847, Conchol. Iconica, Chiton, pl. 16, fig. 89.

*References.* Pilsbry, 1892, p. 279; Oldroyd, 1927c, p. 264.

*Type Locality.* California.

*Range.* Straits of Juan de Fuca to San Diego, California.

#### Genus *Schizoplax* Dall 1878

**Schizoplax brandtii** Middendorff 1846, Bull. Imp. Acad. Sci. St. Petersburg., vol. 6, p. 117.

*References.* Pilsbry, 1892, p. 47; Oldroyd, 1927c, p. 266.

*Type Locality.* "Insulae Scantar et sinus Tuguricus maris Ochotici . . . Ins. Sitka, Alaska."

*Range.* Shantar Bay, Okhotsk Sea; Bering, Pribilof, and Aleutian Islands, and south to Cape Fox, Alaska.

**Schizoplax multicolor** Dall 1920, Nautilus, vol. 34, p. 22.

*Reference.* Oldroyd, 1927c, p. 265.

*Type Locality.* St. Paul Island, Bering Sea.

*Range.* Bering Sea. Possible for northern British Columbia.

## Family ISCHNOCHITONIDAE

Genus *Callistochiton* Carpenter 1882

***Callistochiton aepynotus*** Dall 1919, Proc. U. S. Nat. Mus., vol. 55, p. 511.

*Reference.* Oldroyd, 1927c, p. 297.

*Type Locality.* Puget Sound, 37 fms.

*Range.* Known only from the type locality.

***Callistochiton crassicostatus*** Pilsbry 1892, Man. Conch., vol. 14, p. 264.

*Reference.* Oldroyd, 1927c, p. 293.

*Type Locality.* Monterey, California.

*Range.* Forrester Island, Alaska, to San Diego, California.

***Callistochiton fisheri*** Dall 1919, Proc. U. S. Nat. Mus., vol. 55, p. 512.

*Reference.* Oldroyd, 1927c, p. 297.

*Type Locality.* Glory of Russia Bay, Tanaga Island, Aleutians.

*Range.* Known only from the type locality. Possible for northern British Columbia.

Genus *Chaetopleura* Shuttleworth 1853

***Chaetopleura beanii*** Carpenter 1857, Mazatlan Catalogue, p. 197.

*References.* Pilsbry, 1892, p. 32; Oldroyd, 1927c, p. 286.

*Type Locality.* Mazatlan, Mexico.

*Range.* Unalaska, Alaska, to Mazatlan, Mexico.

Section *Dendrochiton* Berry 1911

***Chaetopleura thamnopora*** Berry 1911, Proc. Acad. Nat. Sci. Phila., 1911, p. 487.

*Reference.* Oldroyd, 1927c, p. 289.

*Type Locality.* Off Monterey, California.

*Range.* Resurrection Bay, Alaska, to San Martin Island, California.

Genus *Ischnochiton* Gray 1847Section *Lepidozona* Pilsbry 1892

***Ischnochiton mertensii*** Middendorff 1846, Bull. Imp. Acad. Sci. St. Petersb., vol. 6, p. 118.

*References.* Pilsbry, 1892, p. 125; Oldroyd, 1927c, p. 280; Chace and Chace, 1933, p. 124.

*Type Locality.* California.

*Range.* Sitka, Alaska, to San Pedro, California.

**Ischnochiton willetti** Berry 1917, Proc. Calif. Acad. Sci., (4) vol. 7, p. 236.

*Reference.* Oldroyd, 1927c, p. 279.

*Type Locality.* Forrester Island, Alaska, 15 to 20 fms.

*Range.* Known only from the type locality. Possible for Arctic Canada and British Columbia.

Subgenus *Stenoplax* (Cpr. MS.) Dall 1878

**Ischnochiton fallax** Carpenter 1892, in Pilsbry, H. A., Man. Conch., vol. 14, p. 59.

*Reference.* Oldroyd, 1927c, p. 267.

*Type Locality.* Monterey, California.

*Range.* Vancouver Island to Todos Santos Bay, Lower California.

Section *Stenoradsia* Carpenter 1878

**Ischnochiton interstinctus** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 145.

*References.* Pilsbry, 1892, p. 119; Oldroyd, 1927c, p. 275.

*Type Locality.* ?

*Range.* Aleutian Islands to Sitka, Alaska, and Catalina Island, California.

**Ischnochiton lividus** Middendorff 1847, Malac. Rossica, vol. 1, p. 124.

*References.* Pilsbry, 1892, p. 76; Oldroyd, 1927c, p. 274.

*Type Locality.* Sitka Island, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Ischnochiton radians** Carpenter 1892, in Pilsbry, H. A., 1892, Man. Conch., vol. 14, p. 121.

*References.* Pilsbry, 1893, p. 75; Oldroyd, 1927c, p. 275.

*Type Locality.* Monterey, California.

*Range.* Prince of Wales Island, Alaska, to San Pedro, California.

**Ischnochiton retiporosus retiporosus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci., for 1863, p. 649.

*References.* Pilsbry, 1892, p. 75; Oldroyd, 1927c, p. 272.

*Type Locality.* Puget Sound.

*Range.* Victoria, British Columbia, to San Pedro, California.

**Ischnochiton retiporosus punctatus** Whiteaves 1887, Trans. Roy. Soc. Canada, vol. 4, p. 125.

*Reference.* Oldroyd, 1927c, p. 273.

*Type Locality.* Discovery Passage, British Columbia, at Station 7.

*Range.* Duncan Bay, British Columbia.

**Ischnochiton ritteri** Dall 1919, Proc., U. S. Nat. Mus., vol. 55, p. 505.

*Reference.* Oldroyd, 1927c, p. 272.

*Type Locality.* Channel at Juneau, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

Section *Tripoplax* Berry 1919

**Ischnochiton trifidus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 649.

*References.* Pilsbry, 1892, p. 141; Oldroyd, 1927c, p. 285.

*Type Locality.* ?

*Range.* Shumagin Islands to Puget Sound.

Family MOPALIIDAE

Genus *Mopalia* Gray 1847

**Mopalia celetoides** Dall 1919, Proc. U. S. Nat. Mus., vol. 55, p. 514.

*Reference.* Oldroyd, 1927c, p. 313.

*Type Locality.* Forrester Island, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Mopalia ciliata ciliata** Sowerby 1840, Ann. Mag. Nat. Hist., (n.s.) vol. 4, p. 289.

*References.* Pilsbry, 1892, p. 303; Oldroyd, 1927c, p. 300; Chace and Chace, 1933, p. 124.

*Type Locality.* ?

*Range.* Vancouver Island, British Columbia, to Lower California.

**Mopalia ciliata elevata** Pilsbry 1892, Man. Conch., vol. 14, p. 300.

*Reference.* Oldroyd, 1927c, p. 302.

*Type Locality.* Puget Sound ?

*Range.* Forrester Island, Alaska, to Puget Sound.

**Mopalia ciliata wosnessenskii** Middendorff 1847, Bull. Imp. Acad. Sci. St. Petersburg, vol. 6, p. 119.

*References.* Pilsbry, 1892, p. 305; Oldroyd, 1927c, p. 301.

*Type Locality.* ?

*Range.* Unalaska, Alaska, to Santa Rosa Island, Pacific Grove, California.

**Mopalia cirrata** Berry 1919, Lorquinia, January 1919, p. 5.

*Reference.* Oldroyd, 1927c, p. 307.

*Type Locality.* Albatross Station 4263, Dundas Bay, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Mopalia egretta** Berry 1919, *Lorquinia*, January 1919, p. 5.

*Reference.* Oldroyd, 1927c, p. 309.

*Type Locality.* Forrester Island, Alaska, 20 fms.

*Range.* Forrester Island, Alaska, to Puget Sound, Washington.

**Mopalia goniura** Dall 1919, *Proc. U. S. Nat. Mus.*, vol. 55, p. 513.

*Reference.* Oldroyd, 1927c, p. 312.

*Type Locality.* Granite Cove, Port Althorp, Alaska.

*Range.* Granite Cove, Port Althorp, Alaska, to Puget Sound.

**Mopalia imporcata** Carpenter 1864, *Suppl. Rept. Brit. Assoc. Adv. Sci.*, for 1863, p. 648.

*References.* Pilsbry, 1892, p. 301; Oldroyd, 1927c, p. 308.

*Type Locality.* Puget Sound.

*Range.* Forrester Island, Alaska, to San Pedro, California.

**Mopalia muscosa muscosa** Gould 1846, *Proc. Boston Soc. Nat. Hist.*, vol. 2, p. 145.

*References.* Pilsbry, 1892, p. 295; Oldroyd, 1927c, p. 303; Chace and Chace, 1933, p. 124.

*Type Locality.* Puget Sound, Washington.

*Range.* Shumagin Islands, Alaska, to Rosario, Lower California.

**Mopalia muscosa hindsii** Reeve 1847, *Conchol. Iconica*, Chiton, pl. 12, fig. 67 a-b.

*References.* Pilsbry, 1892, p. 296; Oldroyd, 1927c, p. 304; Chace and Chace, 1933, p. 124.

*Type Locality.* ?

*Range.* Sitka, Alaska, to Gulf of California.

**Mopalia muscosa kennerlyi** Carpenter 1864, *Rept. Brit. Assoc. Adv. Sci.* for 1863, p. 648.

*Reference.* Oldroyd, 1927c, p. 306.

*Type Locality.* Puget Sound ?

*Range.* Shumagin Islands, Alaska, to Monterey, California.

**Mopalia muscosa laevior** Pilsbry 1918, *Nautilus*, vol. 31, p. 126.

*References.* Pilsbry, 1892, p. 300; Oldroyd, 1927c, p. 305.

*Type Locality.* Olympia, Washington.

*Range.* Known only from the type locality. Possible for southern British Columbia.

**Mopalia muscosa lignosa** Gould 1846, *Proc. Boston Soc. Nat. Hist.*, vol. 2, p. 142.

*References.* Pilsbry, 1892, p. 299; Oldroyd, 1927c, p. 305; Chace and Chace, 1933, p. 124.

*Type Locality.* Puget Sound.

*Range.* Sitka, Alaska, to Magdalena Bay, Lower California.

**Mopalia muscosa swanii** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 648.

*Reference.* Oldroyd, 1927c, p. 306.

*Type Locality.* Tatooche Island.

*Range.* Shumagin Islands, Alaska, to Monterey, California.

**Mopalia sinuata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 648.

*References.* Pilsbry, 1892, p. 303; Oldroyd, 1927c, p. 309.

*Type Locality.* Puget Sound.

*Range.* Forrester Island, Alaska, to San Francisco, California.

#### Genus *Placiphorella* Carpenter 1878

**Placiphorella borealis** Pilsbry 1892, Man. Conch., vol. 14, p. 309.

*Reference.* Oldroyd, 1927c, p. 314.

*Type Locality.* Bering Island, Bering Sea.

*Range.* Bering Sea, Kuril Islands.

**Placiphorella pacifica** Berry 1919, Lorquinia, January 1919, p. 6.

*Reference.* Oldroyd, 1927c, p. 314.

*Type Locality.* Station 4245, Kasa-an-Bay, Alaska, in 95 to 98 fms.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Placiphorella rufa** Berry 1917, Proc. Calif. Acad. Sci., (4) vol. 7, p. 241.

*Reference.* Oldroyd, 1927c, p. 316.

*Type Locality.* Forrester Island, Alaska, 15 to 25 fms.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Placiphorella stimpsoni** Gould 1859, Proc. Boston Soc. Nat. Hist., vol. 7, p. 165.

*References.* Pilsbry, 1892, p. 307; Oldroyd, 1927c, p. 316.

*Type Locality.* Hakodadi Bay, Japan.

*Range.* Bering Island, and on the east and south, to Cerros Island, Lower California.

#### Family ACANTHOCHITONIDAE

#### Genus *Katherina* Gray 1847

**Katherina tunicata** Wood 1815, General Conchology, p. 11.

*References.* Pilsbry, 1892, p. 141; Oldroyd, 1927c, p. 319.

*Type Locality.* West coast of North America.

*Range.* Western and southern Bering Sea, to Cook's Inlet, Alaska, and south to Catalina Island, California.

## Family CRYPTOCHITONIDAE

Genus *Amicula* Gray 1847

***Amicula amiculata*** Pallas 1786, Nova Acta Acad. Scient. Imp. Pétrap., vol. 2, p. 235.

*Reference.* Oldroyd, 1927c, p. 321.

*Type Locality.* Kuril Islands.

*Range.* Kuril Islands and northern Japan, to Farallon Islands, California.

***Amicula pallasii*** Middendorff 1846, Bull. Imp. Acad. Sci. St. Pétersb., vol. 6, p. 117.

*Reference.* Oldroyd, 1927c, p. 323.

*Type Locality.* Okhotsk Sea.

*Range.* Arctic Ocean, Bering and Okhotsk Seas, and eastward to the Shumagin Islands, Alaska.

***Amicula vestita*** Sowerby 1829, Jour. of Zoölogy, vol. 4, p. 368.

*References.* Pilsbry, 1892, p. 43; Whiteaves, 1901a, p. 155; Johnson, 1915, p. 10; Dall, 1919b, p. 23A; Oldroyd, 1927c, p. 322; Johnson, 1934, p. 14.

*Type Locality.* Arctic.

*Range.* Arctic Ocean and Bering Sea south to Bering, Pribilof, and Hagemeister Islands. Arctic Ocean south to Massachusetts Bay, 5 to 30 fms.

Genus *Cryptochiton* Middendorff and Gray 1847

***Cryptochiton stelleri*** Middendorff 1846, Bull. Cl. physico-Mathématique, Acad. Sci. St. Pétersb., tome 7, No. 8, p. 116.

*References.* Oldroyd, 1927c, p. 320; Chace and Chace, 1933, p. 123.

*Type Locality.* Kamchatka.

*Range.* Bering Island, Kamchatka, Kuril Islands, Okhotsk Sea, Aleutian Islands, Cook's Inlet, to San Miguel and San Nicolas Islands, California.

## Order Aplacophora

## Suborder CHAETODERMATOMORPHA

## Family CHAETODERMATIDAE

Genus *Chaetoderma* Lovén 1845

***Chaetoderma nitidulum*** Lovén 1844, Öfvers. Kongl. Vet.-Akad. Förh., vol. 1, p. 116.

*References.* Whiteaves, 1901a, p. 153; Johnson, 1934, p. 14.

*Type Locality.* ?

*Range.* Greenland, 10 to 250 fms.; Casco Bay, Maine, 48 to 64 fms.

*Remarks.* Whiteaves (1901, p. 153) records this species from Passamaquoddy Bay, 30 fms., and Nova Scotia, common, 10 to 100 fms.



## Suborder NEOMENIOMORPHA

## Family NEOMENIIDAE

Genus *Neomenia* Tullberg 1875

***Neomenia carinata*** Tullberg 1875, Bih. Svenska Akadem. Handlingar, vol. 3, No. 13, p. 1.

*Reference.* Pratt, 1948, p. 561.

*Type Locality.* ?

*Range.* North Atlantic.

*Remarks.* Not yet recorded for Canadian waters, but probably to be found off the eastern coast.

Genus *Proneomenia* Hubrecht 1880

***Proneomenia sluiteri*** Hubrecht 1880, Zoöl. Anzeiger, vol. 3, p. 589.

*Reference.* Pratt, 1948, p. 561.

*Type Locality.* Barents Sea.

*Range.* Arctic Seas.

*Remarks.* There are no records known to me for Canadian waters, but this species is almost certainly found off the Canadian Arctic Islands.

## Class PELECYPODA

## MARINE SPECIES

## Order Prionodesmacea

## Family SOLEMYIDAE

Genus *Solemya* Lamarck 1818

***Solemya borealis*** Totten 1834, Amer. Jour. Sci., vol. 26, p. 366.

*References.* Verrill, 1873, p. 689; Whiteaves, 1901a, p. 144; Johnson, 1915, p. 11; 1934, p. 15.

*Type Locality.* Vicinity of Newport, R.I.

*Range.* Nova Scotia to Connecticut.

***Solemya johnsoni*** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 189.

*References.* Oldroyd, 1924, p. 9; Grant and Gale, 1931, p. 109.

*Type Locality.* Albatross Station 3010, off coast of Lower California, 1,005 fms.

*Range.* British Columbia? and Oregon to Panama.

*Remarks.* Oldroyd (1924) gives only Oregon to Panama, but there is one specimen (No. 1349) from Forbes Island, near David Channel, Vancouver Island, British Columbia, identified as this species, in the National Museum of Canada.

**Solemya velum** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 317.

*References.* Verrill, 1873, p. 689; Whiteaves, 1901a, p. 144; Johnson, 1915, p. 11; 1934, p. 15.

*Type Locality.* "Southern Coast" (of the United States).

*Range.* Nova Scotia to Florida.

#### Family NUCULIDAE

##### Genus *Nucula* Lamarek 1799

**Nucula cancellata** Jeffreys 1881, Proc. Zoöl. Soc. London, 1881, p. 951.

*References.* Verrill and Bush, 1898, p. 854; Johnson, 1934, p. 15.

*Type Locality.* ?

*Range.* Off Newfoundland to Virginia, 384 to 2,033 fms.

*Remarks.* The name *N. cancellata* replaces *N. reticulata* Jeffreys 1876, *non* Hinds 1843, Proc. Zoöl. Soc. London, 1879, p. 583. The original description is in Ann. Mag. Nat. Hist., November 1876, p. 429.

**Nucula carlottensis** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 6.

*Reference.* Oldroyd, 1924, p. 13.

*Type Locality.* Off Queen Charlotte Islands, 876 fms., mud.

*Range.* Queen Charlotte Islands, British Columbia, to Anacapa Island, California.

**Nucula delphinodonta** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 40.

*References.* Verrill, 1873, p. 691; Whiteaves, 1901a, p. 124; Drew, 1901, pp. 313-391; Johnson, 1915, p. 12; 1934, p. 15.

*Type Locality.* Casco Bay, Maine.

*Range.* Labrador to New Jersey.

**Nucula expansa** Reeve 1855, Last of the Arctic Voyages, App. p. 397.

*References.* Whiteaves, 1901a, p. 123; Oldroyd, 1924, p. 14; Johnson, 1934, p. 15.

*Type Locality.* Northumberland Sound, Arctic Ocean.

*Range.* Arctic Ocean to Sitka, Alaska, and San Diego, California. Arctic Ocean and Hudson Bay to the south shore of the Gulf of St. Lawrence, 30 fms. Pleistocene of Quebec and New Brunswick.

**Nucula groenlandica** Posselt 1898, Med. om Grönland, vol. 23, p. 47.

*Type Locality.* West Greenland, 67° 50' N., 57° 4' W., 132 fms.

*Range.* Known only from the type locality.

**Nucula linki** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 394.

*Reference.* Oldroyd, 1924, p. 12.

*Type Locality.* Station 3034, 24 fms., mud, off Point Fermin, Lower California.

*Range.* Queen Charlotte Sound to Guaymas, Mexico.

**Nucula proxima truncula** Dall 1898, Trans. Wagner Free Inst. Sci., vol. 3, pt. 4, p. 574.

*References.* Whiteaves, 1901a, p. 123; Johnson, 1915, p. 11; 1934, p. 15.

*Type Locality.* None given.

*Range.* Nova Scotia to New York, 2 to 30 fms.

*Remarks.* The reference given above (Dall, 1898) is the earliest I have been able to find. In it Dall gives no reference to an earlier description, but on the other hand he does not indicate that the variety is new.

**Nucula quirica** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 394.

*References.* Oldroyd, 1924, p. 11; Schenck, 1939, p. 33.

*Type Locality.* Chugachik Bay, Cook's Inlet, Alaska.

*Range.* Known only from the type locality.

*Remarks.* Schenck (1939, p. 33) thinks Dall's name may be antedated by *Nucula bellotii* A. Adams.

**Nucula tenuis tenuis** Montagu 1808, Test. Brit., Suppl., p. 56.

*References.* Verrill, 1873, p. 691; Whiteaves, 1901a, p. 122; Johnson, 1915, p. 12; Oldroyd, 1924, p. 13; Grant and Gale, 1931, p. 111; Johnson, 1934, p. 15.

*Type Locality.* Dunbar, Scotland.

*Range.* Point Barrow, Alaska, to Coronado Islands, California. Circumboreal. Labrador to North Carolina, 4 to 100 fms. Florida Strait, 175 to 450 fms. Pliocene of California. Pleistocene of Ontario, Quebec, and Maine. Miocene? of Alaska.

**Nucula tenuis inflata** Hancock 1846, Ann. Mag. Nat. Hist., vol. 18, p. 333.

*References.* Posselt, 1898, p. 48; Whiteaves, 1901a, p. 122; Johnson, 1934, p. 15.

*Type Locality.* West Coast of Davis Strait.

*Range.* Labrador to Massachusetts, 294 to 440 fms.

*Remarks.* The type locality given would apply to all of Hancock's species in this reference where no locality is given in the text.

#### Subgenus *Acila* H. and A. Adams 1858

**Nucula castrensis** Hinds 1843, Proc. Zoöl. Soc. London, 1843, p. 98.

*References.* Oldroyd, 1924, p. 14; Grant and Gale, 1931, p. 116.

*Type Locality.* Sitka, Alaska.

*Range.* Bering Sea to San Diego, California. Miocene of Oregon, Washington, and California; Pliocene of Oregon and California; Pleistocene of California.

## Family NUCULANIDAE

Genus *Ledella* Verrill and Bush 1897

***Ledella messanensis sublevis*** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 856.

*Reference.* Johnson, 1934, p. 17.

*Type Locality.* None given.

*Range.* Off Grand Banks to Virginia, 1,188 to 2,033 fms.

Genus *Malletia* Desmoulins 1832

***Malletia faba*** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 10.

*Reference.* Oldroyd, 1924, p. 37.

*Type Locality.* Off Sea Lion Rock, Washington.

*Range.* Queen Charlotte Islands, British Columbia, to Lower California.

***Malletia flora*** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 400.

*Reference.* Oldroyd, 1924, p. 37.

*Type Locality.* Station 2859, southwest of Sitka Bay, Alaska, 1,569 fms.

*Range.* Known only from the type locality.

***Malletia pacifica*** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 11.

*Reference.* Oldroyd, 1924, p. 37.

*Type Locality.* Clarence Strait, Alaska.

*Range.* Chignik Bay, Alaska, to Monterey, California.

***Malletia talama*** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 400.

*Reference.* Oldroyd, 1924, p. 36.

*Type Locality.* Station 3603, off Pribiloff Islands, Bering Sea, 1,771 fms.

*Range.* Bering Sea to Oregon.

Subgenus *Neilonella* Dall 1881

***Malletia subovata*** Verrill and Bush 1897, Amer. Jour. Sci. 4th ser., vol. 3, p. 57, footnote.

*References.* Verrill and Bush, 1898, p. 878; Johnson, 1934, p. 19.

*Type Locality.* None designated in the original description.

*Range.* Nova Scotia to North Carolina, 125 to 1,731 fms.

Genus *Nuculana* Link 1807

***Nuculana acuta*** Conrad 1831, Amer. Marine Conch., p. 182.

*References.* Johnson, 1915, p. 13; Oldroyd, 1924, p. 16; Grant and Gale, 1931, p. 123; Johnson, 1934, p. 16.

*Type Locality.* Atlantic Ocean, off North Carolina.

*Range.* Nazan Bay, Atka Island, Alaska, and Aleutian Islands to Gulf of California. Atlantic Coast of the United States. Pleistocene, Pliocene, and Miocene of both coasts.

**Nuculana austini** Oldroyd 1935, Nautilus, vol. 49, p. 13.

*Type Locality.* Off Neck Point, Vancouver Island, 100 fms.

*Range.* West coast of Vancouver Island, 25 to 100 fms.

**Nuculana buccata** Steenstrup 1842, Index Moll. Groenl., p. 17.

*References.* Möller, 1842, p. 25; Posselt, 1898, p. 43; Johnson, 1934, p. 17.

*Type Locality.* Greenland.

*Range.* Arctic Ocean and Bering Sea. Greenland.

**Nuculana cellulita** Dall 1896, Nautilus, vol. 10, p. 1.

*References.* Oldroyd, 1924, p. 16; Grant and Gale, 1931, p. 122.

*Type Locality.* Puget Sound, near Port Orchard, Washington.

*Range.* Puget Sound. Pleistocene of California.

**Nuculana conceptionis** Dall 1896, Nautilus, vol. 10, p. 2.

*References.* Oldroyd, 1924, p. 21; Grant and Gale, 1931, p. 120.

*Type Locality.* Off Point Conception, California.

*Range.* Aleutian Islands to San Diego, California; Pliocene of California.

**Nuculana dalli** Krause 1885, Archiv für Naturg., vol. 51, p. 27.

*Reference.* Oldroyd, 1924, p. 24.

*Type Locality.* Bering Sea.

*Range.* Unalaska, Aleutian Islands.

**Nuculana extenuata** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col. No. 2, p. 8.

*Reference.* Oldroyd, 1924, p. 22.

*Type Locality.* Off Dixon Entrance, British Columbia, 1,569 fms., ooze.

*Range.* Alaska to British Columbia.

**Nuculana fossa fossa** Baird 1863, Proc. Zoöl. Soc. London, 1863, p. 71.

*References.* Oldroyd, 1924, p. 19; Grant and Gale, 1931, p. 120.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Kotzebue Sound, Alaska, to Puget Sound, British Columbia, and Washington. Pleistocene of Alaska and California.

**Nuculana fossa curtulosa** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 396.

*Reference.* Oldroyd, 1924, p. 20.

*Type Locality.* Unalaska harbour, Alaska, 60 fms.

*Range.* Bering Sea and Unalaska, Alaska.

**Nuculana fossa sculpta** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 396.

*References.* Dall, 1921a, p. 11; Oldroyd, 1924, p. 19.

*Type Locality.* Station 2855, southeast of Alaska Peninsula, 60 fms., mud.

*Range.* South of Alaska Peninsula, 60 fms.

**Nuculana fossa vaginata** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 396.

*Reference.* Oldroyd, 1924, p. 20.

*Type Locality.* Station 4244, Kana-an Bay, Alaska, 50 fms., mud.

*Range.* Known only from the type locality.

**Nuculana hamata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 98.

*References.* Oldroyd, 1924, p. 23; Grant and Gale, 1931, p. 125.

*Type Locality.* Santa Barbara, California.

*Range.* Puget Sound to Panama Bay. Pleistocene of California.

**Nuculana jacksoni** Gould 1841, Rept. Inv. Mass., p. 102.

*References.* Whiteaves, 1901a, p. 125; Johnson, 1934, p. 16.

*Type Locality.* None given in the original description.

*Range.* Labrador to Maine, 10 to 80 fms.

**Nuculana leonina** Dall 1896, Nautilus, vol. 10, p. 2.

*Reference.* Oldroyd, 1924, p. 21.

*Type Locality.* Off Sea Lion Rock, coast of Washington, 477 to 559 fms.

*Range.* Straits of Juan de Fuca to latitude 36° N.

**Nuculana liogona** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 396.

*Reference.* Oldroyd, 1924, p. 18.

*Type Locality.* Station 3604, Bering Sea, 1,401 fms., mud.

*Range.* Known only from the type locality.

**Nuculana minuta** Fabricius 1776, Fauna Grönl., p. 414.

*References.* Hancock, 1846, p. 333; Whiteaves, 1901a, p. 124; Oldroyd, 1924, p. 15; Grant and Gale, 1931, p. 122; Johnson, 1934, p. 16.

*Type Locality.* Greenland.

*Range.* Arctic Ocean to San Diego, California. Labrador to Nova Scotia, 15 to 50 fms. Penobscot Bay, Maine.

**Nuculana penderi** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14-N, p. 9.

*References.* Oldroyd, 1924, p. 17; Grant and Gale, 1931, p. 124.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Queen Charlotte Islands, British Columbia, to Santa Barbara, California. Forrester Island, Alaska. Pleistocene of California.

**Nuculana pernula** Müller 1779, B. Ges. Naturf. zu Berlin, vol. 4, p. 55.

*References.* Verrill and Bush, 1898, p. 855; Whiteaves, 1901a, p. 124; Johnson, 1915, p. 13; Oldroyd, 1924, p. 19; Grant and Gale, 1931, p. 119; Johnson, 1934, p. 16.

*Type Locality.* North Sea.

*Range.* Arctic Ocean to Plover Bay, eastern Siberia. Greenland to Massachusetts, 10 to 216 fms. Pleistocene of Quebec, New Brunswick, Maine, Northwest Territories, and Greenland; Pliocene, English Crag.

**Nuculana radiata** Krause 1885, Archiv. für Naturg., vol. 51, p. 23.

*Reference.* Oldroyd, 1924, p. 25.

*Type Locality.* Emmahafen, Plover Bay, Bering Straits.

*Range.* Arctic Ocean; Bering Sea.

**Nuculana tenuisulcata** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 64.

*References.* Verrill, 1873, p. 690; Whiteaves, 1901a, p. 125; Johnson, 1915, p. 13; 1934, p. 16.

*Type Locality.* Massachusetts Bay.

*Range.* Gulf of St. Lawrence to Rhode Island, 10 to 150 fms.

#### Genus *Tindaria* Bellardi 1875

**Tindaria brunnea** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 401.

*Reference.* Oldroyd, 1924, p. 38.

*Type Locality.* Station 3604, Bering Sea, 1,401 fms.

*Range.* Bering Sea to Tillamook, Oregon.

**Tindaria gibbsii** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 10.

*Reference.* Oldroyd, 1924, p. 40.

*Type Locality.* Off Queen Charlotte Islands, British Columbia.

*Range.* Queen Charlotte Islands to the Coronado Islands.

**Tindaria kennerlyi** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 11.

*Reference.* Oldroyd, 1924, p. 41.

*Type Locality.* Off Coast of Washington.

*Range.* Off Sitka, Alaska, to the Santa Barbara Islands, in deep water.

#### Genus *Yoldia* Möller 1842

**Yoldia arctica** Gray 1819, App. Parry's Voyage, p. ccxli.

*References.* Oldroyd, 1924, p. 26; Johnson, 1934, p. 17.

*Type Locality.* Arctic.

*Range.* Arctic Ocean; Greenland.



**Yoldia beringiana** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 399.

*Reference.* Oldroyd, 1924, p. 28.

*Type Locality.* Station 3607, Bering Sea, off Pribiloff Islands, 987 fms.

*Range.* Known only from the type locality.

**Yoldia cascoensis** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 2, p. 122.

*References.* Johnson, 1915, p. 15; 1934, p. 17.

*Type Locality.* Casco Bay, Maine, from stomach of haddock.

*Range.* Known only from the type locality.

**Yoldia collinsoni** Dall 1919, Rept. Can. Arct. Exped., vol. 8, pt. A, p. 19A.

*Reference.* Oldroyd, 1924, p. 26.

*Type Locality.* Station 27s, off Collinson Point, Alaskan Arctic, 3 fms.

*Range.* Known only from the type locality.

**Yoldia gardneri** Oldroyd 1935, Nautilus, vol. 49, p. 14.

*Type Locality.* Gardner Bay, Pender Harbour, Vancouver Island, British Columbia, 4 fms.

*Range.* Known only from the type locality.

**Yoldia glacialis** Gray 1828, Index Test., Suppl., pl. 2, fig. 6.

*References.* Whiteaves, 1901a, p. 127; Oldroyd, 1924, p. 26; Johnson, 1934, p. 17.

*Type Locality.* Arctic.

*Range.* Arctic Ocean, Point Barrow; Greenland; Beechy Island, Richmond Gulf, Hudson Strait, 15 to 25 fms. Pleistocene of Eastern Canada.

**Yoldia limatula** Say 1831, Amer. Conch., p. 163, pl. 12.

*References.* Verrill, 1873, p. 689; Whiteaves, 1901a, p. 125; Johnson, 1915, p. 14; Oldroyd, 1924, p. 31; Johnson, 1934, p. 17.

*Type Locality.* Nahant, Mass.

*Range.* Arctic Ocean to San Diego, California. Gulf of St. Lawrence to North Carolina. Pleistocene of Quebec.

**Yoldia martyria** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 9.

*Reference.* Oldroyd, 1924, p. 29.

*Type Locality.* Off San Pedro Martir Island, Gulf of California.

*Range.* Kana-an Bay, Alaska, to the Gulf of California.

**Yoldia montereyensis** Dall 1893, Nautilus, vol. 7, p. 29.

*Reference.* Oldroyd, 1924, p. 28.

*Type Locality.* U. S. Fish Comm. Station 3202, 382 fms., green mud, Monterey Bay, California.

*Range.* Chirikoff Island, Alaska, to San Diego, California.

**Yoldia myalis** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 62.

*References.* Verrill, 1873, p. 689; Whiteaves, 1901a, p. 126; Johnson, 1915, p. 14; Oldroyd, 1924, p. 30; Johnson, 1934, p. 17.

*Type Locality.* Massachusetts Bay.

*Range.* Arctic Ocean to Puget Sound. Hudson Strait to Massachusetts, 7 to 80 fms. Pleistocene of Labrador.

**Yoldia sapotilla** Gould 1841, Rept. Inv. Mass., p. 100.

*References.* Verrill, 1873, p. 689; Whiteaves, 1901a, p. 125; Johnson, 1915, p. 14; Johnson, 1934, p. 17.

*Type Locality.* Vicinity of Cape Cod.

*Range.* Labrador to North Carolina, 4 to 100 fms. Pleistocene of New Brunswick.

**Yoldia secunda** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 398.

*Reference.* Oldroyd, 1924, p. 28.

*Type Locality.* Station 3077, Clarence Strait, Alaska, 322 fms.

*Range.* Southeastern Alaska, in deep water.

**Yoldia vancouverensis** E. A. Smith 1880, Ann. Mag. Nat. Hist., 5th ser., vol. 6, p. 289.

*Reference.* Oldroyd, 1924, p. 29.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

#### Section *Cnesterium* Dall 1898

**Yoldia ensifera** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 9.

*Reference.* Oldroyd, 1924, p. 32.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Southeastern Alaska to San Diego, California.

**Yoldia scissurata** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 8.

*References.* Oldroyd, 1924, p. 31; Grant and Gale, 1931, p. 131.

*Type Locality.* St. Paul, Kodiak Island, Alaska.

*Range.* Arctic Ocean to Puget Sound; Pleistocene of California.

**Yoldia scissurata strigata** Dall 1909, U. S. Geol. Surv. Prof. Paper 59, pp. 18, 104.

*Reference.* Grant and Gale, 1931, p. 131.

*Type Locality.* Coos Bay, Oregon, Miocene.

*Range.* Miocene of Oregon and Washington; Pliocene of Oregon? Recent of British Columbia?

**Yoldia seminuda** Dall 1871, Amer. Jour. Conch., vol. 7, p. 153.

*Reference.* Oldroyd, 1924, p. 31.

*Type Locality.* St. Pauls Harbour, Kodiak Island, Alaska, 17 fms.

*Range.* Okhotsk and Bering seas to Sitka, Alaska.

Subgenus *Megayoldia* Verrill and Bush 1897

**Yoldia thraciaeformis** Storer 1838, Boston Jour. Nat. Hist., vol. 2, p. 122.

*References.* Verrill, 1873, p. 690; Whiteaves, 1901a, p. 127; Oldroyd, 1924, p. 27; Johnson, 1934, p. 17.

*Type Locality.* Off Point Race, Atlantic.

*Range.* Arctic Ocean to Oregon and Puget Sound; Greenland to Gulf of St. Lawrence and Massachusetts, 10 to 200 fms.

Subgenus *Yoldiella* Verrill and Bush 1897

**Yoldia cecinella** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 399.

*Reference.* Oldroyd, 1924, p. 34.

*Type Locality.* Station 2823, off La Paz, Gulf of California, in about 26 fms.

*Range.* Aleutian Islands to the Gulf of California.

**Yoldia expansa** Jeffreys 1876, Ann. Mag. Nat. Hist., 4th ser., vol. 18, p. 431.

*References.* Verrill and Bush, 1898, p. 871; Johnson, 1934, p. 18.

*Type Locality.* None given.

*Range.* Off Newfoundland, 206 fms.

**Yoldia fraterna** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 867.

*References.* Johnson, 1915, p. 16; 1934, p. 18.

*Type Locality.* None given.

*Range.* Gulf of St. Lawrence to off Georgia, 90 to 1,608 fms.

**Yoldia frigida** Torell 1859, Bidrag Spitzb., Moll., p. 148.

*References.* Verrill and Bush, 1898, p. 872; Whiteaves, 1901a, p. 126; Johnson, 1915, p. 16; 1934, p. 18.

*Type Locality.* Not located.

*Range.* Gulf of St. Lawrence to Massachusetts, 88 to 312 fms.

**Yoldia inconspicua** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 869.

*References.* Johnson, 1915, p. 17; 1934, p. 18.

*Type Locality.* None given.

*Range.* Nova Scotia to North Carolina, 100 to 705 fms.

**Yoldia intermedia** Sars 1865, Fos. Dyre Quatern. Per., p. 38.

*Reference.* Oldroyd, 1924, p. 35.

*Type Locality.* Vadsø, Norway.

*Range.* Bering Sea to Norton Sound. Circumboreal.

**Yoldia iris iris** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 863.

*Reference.* Johnson, 1934, p. 18.

*Type Locality.* None given.

*Range.* Gulf of St. Lawrence to North Carolina, 20 to 781 fms.

**Yoldia iris stricta** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 863.

*References.* Johnson, 1915, p. 16; 1934, p. 18.

*Type Locality.* Off Cape Sable, Nova Scotia, 90 fms.

*Range.* Known only from the type locality.

**Yoldia lucida** Lovén 1846, Öfvers. Kongl. Vet.-Akad. Förh., vol. 3, p. 188.

*References.* Verrill and Bush, 1898, p. 861; Whiteaves, 1901a, p. 126; Johnson, 1915, p. 15; 1934, p. 18.

*Type Locality.* Not located.

*Range.* Gulf of St. Lawrence to North Carolina, 22 to 516 fms.

**Yoldia oleacina** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 398.

*Reference.* Oldroyd, 1924, p. 33.

*Type Locality.* Arctic Ocean, north of Bering Strait.

*Range.* Known only from the type locality.

**Yoldia sanesia** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 399.

*Reference.* Oldroyd, 1924, p. 34.

*Type Locality.* Station 4224, Boca de Quadra, Alaska, 160 fms., mud.

*Range.* Boca de Quadra, Alaska, to Point Conception, California.

**Yoldia siliqua** Reeve 1855, Last of the Arctic Voyages, vol. 2, p. 396.

*Reference.* Oldroyd, 1924, p. 35.

*Type Locality.* Arctic Ocean.

*Range.* Arctic Ocean, Point Barrow. "Atlantic".

*Remarks.* Not mentioned by Johnson (1934) nor by Whiteaves (1901a). "Atlantic" is included in its range on the basis of Mrs. Oldroyd's data (1924).

#### Family ARCIDAE

#### Genus *Bathyarca* Kobelt 1891

**Bathyarca glacialis** Gray 1824, Parry's First Voyage, Suppl. to App., p. 244.

*References.* Posselt, 1898, p. 53; Whiteaves, 1901a, p. 128; Johnson, 1934, p. 21.

*Type Locality.* See remarks.

*Range.* Greenland to New England.

*Remarks.* Gray gives no locality at all for this species in the original description. It is reasonable to assume that it came from somewhere in the Arctic but beyond that no type locality can be given unless the types are still extant and labelled with their original locality.

**Bathyarca pectunculoides pectunculoides** Scacchi 1833 (or 1832), Test. Napolitani, p. ?

*References.* Whiteaves, 1901a, p. 128; Johnson, 1915, p. 19; 1934, p. 21.

*Type Locality.* ?

*Range.* Gulf of St. Lawrence to off Cape Cod, Massachusetts, 27 to 506 fms.

*Remarks.* Posselt (1898) dates this species as 1836 and gives another reference, probably in error.

**Bathyarca pectunculoides frielei** Jeffreys 1877, Mag. f. Naturvid., vol. 23, p. 2.

*References.* Jeffreys, 1879, p. 573; Johnson, 1915, p. 19; 1934, p. 21.

*Type Locality.* None given.

*Range.* Gulf of St. Lawrence to off Cape Cod, Massachusetts, 27 to 506 fms.

**Bathyarca pectunculoides grandis** Leche [original description not located. AL]

*Reference.* Johnson, 1934, p. 21.

*Type Locality.* ?

*Range.* Gulf of St. Lawrence to off Cape Cod, Massachusetts, 27 to 506 fms.

**Bathyarca pectunculoides septentrionalis** Sars 1878, Moll. Reg. Arct. Norv., p. 43.

*References.* Johnson, 1915, p. 19; 1934, p. 21.

*Type Locality.* Hasvig, Norway.

*Range.* Gulf of St. Lawrence to off Cape Cod, Massachusetts, 27 to 506 fms.

#### Genus *Glycymeris* Da Costa 1778

**Glycymeris corteziana** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 402.

*References.* Oldroyd, 1924, p. 42; Grant and Gale, 1931, p. 136.

*Type Locality.* Station 2918, on edge of Cortez Bank, California.

*Range.* Forrester Island, Alaska, to Cortez Bank, California. Pleistocene of California.

**Glycymeris septentrionalis** Middendorff 1849, Malac. Rossica, vol. 3, p. 67.

*References.* Oldroyd, 1924, p. 41; Grant and Gale, 1931, p. 134.

*Type Locality.* Arctic.

*Range.* Aleutian Islands to Puget Sound. Miocene, Pliocene, and Pleistocene of California.

**Glycymeris subobsoleta** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 644.

*References.* Oldroyd, 1924, p. 42; Grant and Gale, 1931, p. 134.

*Type Locality.* Neah Bay, Washington.

*Range.* Aleutian Islands, Alaska, to Cortez Bank, California. Pleistocene of California.

*Remarks.* Grant and Gale (1931) give this only varietal rank under *G. septentrionalis*.

Genus *Limopsis* Sassi 1827

**Limopsis akutanica** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 403.

*References.* Oldroyd, 1924, p. 43.

*Type Locality.* Station 2842, southeast of Akutan Island, Aleutians, 72 fms.

*Range.* Known only from the type locality.

**Limopsis minuta** Philippi 1836, Enum. Moll. Siciliae, vol. 1, p. 63.

*References.* Verrill and Bush, 1898, p. 846; Johnson, 1915, p. 17; 1934, p. 21.

*Type Locality.* Sicily.

*Range.* Off Nova Scotia to off Florida, 116 to 2,221 fms.

**Limopsis skenea** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 402.

*Reference.* Oldroyd, 1924, p. 43.

*Type Locality.* Station 4471, Bowers Bank, Bering Sea, 30 fms.

*Range.* Known only from the type locality.

Section *Empleconia* Dall 1908

**Limopsis vaginata** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 190.

*Reference.* Oldroyd, 1924, p. 43.

*Type Locality.* Station 3330, off the coast of Unalaska Island, Bering Sea, 351 fms.

*Range.* Bering Sea and Aleutian Islands.

Family PHILOBRYIDAE

Genus *Philobrya* Carpenter 1872

**Philobrya setosa** Carpenter 1864, Ann. Mag. Nat. Hist., 3rd ser., vol. 13, p. 314.

*References.* Oldroyd, 1924, p. 49; Grant and Gale, 1931, p. 149.

*Type Locality.* Cape San Lucas, Lower California.

*Range.* Forrester Island, Alaska, to the Gulf of California. Pleistocene of California.

Family OSTREIDAE

Genus *Ostrea* Linné 1758

**Ostrea laperousii** Schrenck 1861, Bull. Acad. Imp. St. Petersb., vol. 4, p. 411.

*References.* Elsey, 1933, pp. 6, 23-28; Hanna, 1939, p. 306.

*Type Locality.* Hakodate, Japan.

*Range.* Japan; introduced on the West Coast, British Columbia to California.

*Synonym.* *O. gigas* Thunberg 1793 and auctt., *non* Meuschen 1781.

*Remarks.* This species is the basis of a small industry on the Pacific Coast. Hanna (1939), Quayle (1939), and others have recorded the introduction of several Japanese species brought in with spat of this oyster.

***Ostrea lurida*** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 646.

*References.* Oldroyd, 1924, p. 50; Grant and Gale, 1931, p. 151.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Sitka, Alaska, to Cape San Lucas, Lower California. Miocene? of California; Pliocene and Pleistocene of California.

***Ostrea palmula*** Carpenter 1857, Mazatlan Catalogue, p. 163.

*References.* Oldroyd, 1924, p. 51; Grant and Gale, 1931, p. 152.

*Type Locality.* Southwest Mexico.

*Range.* Puget Sound to Cape San Lucas, Lower California. Pliocene and Pleistocene of California.

#### Subgenus *Crassostrea* Sacco 1897

***Ostrea virginica*** Gmelin 1790, Syst. Nat., 1790, vol. 1, part 6, p. 3336.

*References.* Verrill, 1873, p. 697; Whiteaves, 1901a, p. 115; Stafford, 1913, 159 pp., 7 pls., 1 map; Johnson, 1915, p. 20; 1934, p. 23; McLean, 1941, p. 8; Needler, 1941, 36 pp., 22 pls.

*Type Locality.* "Oceano americano et indico."

*Range.* Chaleur Bay to the West Indies and Texas.

#### Family PECTINIDAE

##### Genus *Pecten* Osbeck 1765

##### Subgenus *Aequipecten* Fischer 1886

***Pecten irradians irradians*** Lamarek 1819, Anim. sans Vert., ed. 1, vol. 6, p. 173.

*References.* Verrill, 1873, p. 695; Whiteaves, 1901a, p. 117; Colton, 1914, p. 52; Johnson, 1934, p. 24.

*Type Locality.* None given.

*Range.* Nova Scotia to Florida and Texas.

##### Subgenus *Chlamys* Bolten 1798

***Pecten albidus*** Dall 1906, U. S. Geol. Surv. Prof. Paper No. 47, p. 136.

*References.* Oldroyd, 1924, p. 52; Grant and Gale, 1931, p. 168.

*Type Locality.* Station 3313, Iliuliuk Harbour. Unalaska, Alaska, 68 fms.



*Range.* Aleutian Islands, Alaska.

*Remarks.* This species may be a variety of *Pecten hericius* Gould according to Oldroyd (1924), or of *P. hastatus* or *P. islandicus* according to Grant and Gale (1931).

**Pecten beringianus** Middendorff 1849, Beitr. Malac. Rossica, p. 12.

*References.* Oldroyd, 1924, p. 55; Grant and Gale, 1931, p. 165.

*Type Locality.* Bering Sea.

*Range.* Bering Sea; Upper Pliocene and Pleistocene of California.

**Pecten hastatus hastatus** Sowerby 1843, Thes. Conch., vol. 1, p. 72.

*References.* Gould, 1850, p. 345 (original description of *P. hericius*); Oldroyd, 1924, p. 52; Grant and Gale, 1931, p. 166.

*Type Locality.* Unknown.

*Range.* Port Althorp, Alaska, to San Diego, California; Upper Miocene, Pliocene, and Pleistocene of California.

*Synonym.* *Pecten hericius* Gould, *fide* Grant and Gale.

**Pecten hindsii hindsii** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 645.

*References.* Oldroyd, 1924, p. 53; Grant and Gale, 1931, p. 163.

*Type Locality.* Unknown.

*Range.* Bering Sea to San Diego, California; Pliocene of California; Pleistocene of British Columbia and California.

*Remarks.* A variety of *P. islandicus* according to Grant and Gale (1931).

**Pecten hindsii kincaidi** I. Oldroyd 1919, Nautilus, vol. 33, p. 135.

*References.* Oldroyd, 1924, p. 53; Grant and Gale, 1931, p. 164.

*Type Locality.* Off San Juan Island, Washington, 25 fms.

*Range.* Puget Sound.

*Remarks.* A variety of *P. islandicus*, according to Grant and Gale (1931).

**Pecten hindsii navarchus** Dall 1898, Trans. Wagner Inst., vol. 3, p. 708.

*References.* Oldroyd, 1924, p. 54; Grant and Gale, 1931, p. 163.

*Type Locality.* Alaska.

*Range.* Bering Sea to San Diego, California; Pleistocene of California and Vancouver Island, British Columbia.

*Remarks.* A synonym of *P. islandicus*, according to Grant and Gale (1931).

**Pecten islandicus islandicus** Müller 1776, Prodr. Zoöl. Danica, p. 248.

*References.* Hancock, 1846, p. 332; Verrill, 1873, p. 696; Whiteaves, 1901a, p. 116; Johnson, 1915, p. 28; Oldroyd, 1924, p. 54; Grant and Gale, 1931, p. 161; Johnson, 1934, p. 24.

*Type Locality.* Northern Seas.

*Range.* Arctic Ocean to Kamchatka and Puget Sound. Greenland to Cape Cod, Massachusetts, 10 to 179 fms. Miocene?, Oligocene?, Pliocene, and Pleistocene of the West Coast of North America; Pleistocene of New Brunswick, Labrador, Quebec, and the east coast of Hudson Bay.

**Pecten islandicus costellatus** Verrill and Bush 1897, Trans. Conn. Acad., vol. 10, pp. 75, 91.

*References.* Verrill and Bush, 1898, p. 835; Johnson, 1915, p. 28; 1934, p. 24.

*Type Locality.* "Two stations off the Grand Banks, in 67-72 fms."

*Range.* Off Newfoundland, 67 to 72 fms.; off Marblehead, Mass., 30 fms.

**Pecten islandicus insculptus** Verrill 1897, Trans. Conn. Acad., vol. 10, pp. 73-74.

*References.* Johnson, 1934, p. 24; Nichols, 1936, p. 128.

*Type Locality.* None given.

*Range.* Greenland and Iceland south to Cape Cod, Massachusetts; Pleistocene of Maine, New Brunswick, Quebec, Labrador, Manitoba, Greenland and northern Europe.

**Pecten islandicus pugetensis** I. Oldroyd 1919, Nautilus, vol. 33, p. 136.

*References.* Oldroyd, 1924, p. 55; Grant and Gale, 1931, p. 168.

*Type Locality.* Off San Juan Island, Washington.

*Range.* Puget Sound; Pliocene? of California.

*Remarks.* A variety of *P. hastatus* according to Grant and Gale (1931).

**Pecten jordani** Arnold 1903, Mem. Calif. Acad. Sci., vol. 3, p. 111.

*References.* Oldroyd, 1924, p. 55; Grant and Gale, 1931, p. 164.

*Type Locality.* San Pedro, California, Pliocene.

*Range.* Puget Sound; Pliocene and Pleistocene of California.

*Remarks.* A variety of *P. islandicus* *fide* Grant and Gale (1931).

**Pecten multirugosus** Gale 1928, Trans. San Diego Soc. Nat. Hist., vol. 5, p. 92.

*References.* Oldroyd, 1924, p. 63; Grant and Gale, 1931, p. 159.

*Type Locality.* San Diego, California.

*Range.* Aleutian Islands, Alaska, to Magdalena Bay, Lower California.

*Synonym.* *Hinnites giganteus* Gray.

#### Section *Patinopecten* Dall 1898

**Pecten caurinus** Gould 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 345.

*References.* Oldroyd, 1924, p. 57; Grant and Gale, 1931, p. 194.

*Type Locality.* Port Townsend, Admiralty Inlet.

*Range.* Wrangell, Alaska, to Siletz Bay, Oregon; Miocene, Pliocene, and Pleistocene of the West Coast of North America.

Subgenus *Placopecten* Verrill 1897

**Pecten grandis** Solander 1786, Portland Catalogue, (p. ?).

*References.* Verrill, 1873, p. 696; Whiteaves, 1901a, p. 117; Drew, 1906, pp. 1-71; Johnson, 1915, p. 29; 1934, p. 25.

*Type Locality.* Not located.

*Range.* Labrador to North Carolina, 10 to 100 fms. Pleistocene of New Brunswick.

Subgenus *Pallium* Schumacher 1817

**Pecten swifti** Bernardi 1858, Jour. de Conchyl., vol. 7, p. 90.

*Reference.* Grant and Gale, 1931, p. 171.

*Type Locality.* Japan.

*Range.* Northern Japan, Sea of Okhotsk, Alaska; Pleistocene of Japan; Pliocene of California and Japan.

Subgenus *Propeamussium* de Gregorio 1884

**Pecten alaskensis** Dall 1871, Amer. Jour. Conch., vol. 7, p. 155.

*References.* Oldroyd, 1924, p. 62; Grant and Gale, 1931, p. 234.

*Type Locality.* Pribiloff Islands, Alaska.

*Range.* Pribiloff Islands, Bering Sea, to Magdalena Bay, Lower California. Japan. Pliocene of California; Pleistocene of Alaska, British Columbia, and California.

Subgenus *Pseudamussium* Klein in Mörch 1853

**Pecten binominatus** Hanna 1924, Proc. Calif. Acad. Sci., ser. 4, vol. 13, p. 175.

*References.* Dall, 1924, p. 32A (*P. andersoni*); Oldroyd, 1924, p. 61.

*Type Locality.* Dolphin and Union Straits, Arctic Ocean.

*Range.* Known only from the type locality.

**Pecten davidsoni** Dall 1897, Nautilus, vol. 11, p. 86.

*Reference.* Oldroyd, 1924, p. 61.

*Type Locality.* Davidson Bank, Alaska, 280 fms., green mud.

*Range.* Davidson and Bowers Bank, Bering Sea, Alaska.

**Pecten groenlandicus** G. B. Sowerby 1842, Thes. Conchyl., vol. 1, p. 57.

*References.* Hancock, 1846, p. 332; Posselt, 1898, p. 9; Verrill and Bush, 1898, p. 837; Whiteaves, 1901a, p. 118; Johnson, 1934, p. 25.

*Type Locality.* Greenland.

*Range.* Greenland; off Newfoundland, 130 to 224 fms.; Pleistocene of Maine, but not Canada (Dawson).

**Pecten pustulosus** Verrill 1873, Amer. Jour. Sci., ser. 3, vol. 5, p. 14.

*References.* Verrill and Bush, 1898, p. 839; Whiteaves, 1901a, p. 119; Johnson, 1915, p. 30; 1934, p. 25.

*Type Locality.* Off Georges Bank.

*Range.* Off Nova Scotia (Whiteaves, 1901a); Gulf of Maine to south of Martha's Vineyard, 115 to 430 fms.

**Pecten pedroanus pedroanus** Trask 1856, Proc. Calif. Acad. Sci., vol. 1, p. 93.

*References.* Dall, 1897, p. 86; Oldroyd, 1924, p. 59; Grant and Gale, 1931, p. 237.

*Type Locality.* San Pedro, California, probably Pliocene.

*Range.* Bering Sea to Guaymas, Mexico. Eocene?, Oligocene?, Miocene, and Pliocene of the West Coast of North America.

*Synonym.* *P. randolphi* Dall 1897.

**Pecten pedroanus vancouverensis** Whiteaves 1893, Ottawa Naturalist, vol. 7, p. 133.

*References.* Oldroyd, 1924, p. 60; Grant and Gale, 1931, p. 238.

*Type Locality.* Forward Inlet, Quatsino Sound, Vancouver Island, British Columbia.

*Range.* Bering Sea to San Diego, California. Pliocene of California.

**Pecten ringnesia** Dall 1924, Rept. Can. Arctic Exped., Suppl. Rept., vol. 8, part A, p. 32A.

*Type Locality.* Ellef Ringnes Island, Arctic Canada.

*Range.* Known only from the type locality.

**Pecten tillamookensis** Arnold 1906, U. S. Geol. Surv. Prof. Paper No. 47, p. 139.

*References.* Oldroyd, 1924, p. 59; Grant and Gale, 1931, p. 237.

*Type Locality.* Off Tillamook Bay, Oregon, Station 3346, 786 fms.

*Range.* Pribiloff Islands, Bering Sea, to Guaymas, Mexico; Eocene and Oligocene of California; Miocene of Washington and California; Pliocene of California.

*Remarks.* A synonym of *P. pedroanus* (Trask) according to Grant and Gale (1931).

**Pecten vitreus** Gmelin 1792, Syst. Nat., vol. 1, p. 3228(?).

*References.* Whiteaves, 1901a, p. 119; Johnson, 1915, p. 30; 1934, p. 25.

*Type Locality.* "Oceano septentrionali".

*Range.* Off Newfoundland and Nova Scotia, 57 to 400 fms.; off Martha's Vineyard, 100 to 106 fms.

*Remarks.* The reference given above for the original description may not be correct. In the 13th edition of the Systema Naturae, the species appears on page 767.

## Family LIMIDAE

Genus *Limatula* Wood 1839

***Limatula attenuata*** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 404.

*Reference.* Oldroyd, 1924, p. 64.

*Type Locality.* Nazan Bay, Atka Island, Aleutian Islands, Alaska.

*Range.* Southern Bering Sea, the Aleutian Islands, and eastward to the Shumagin Islands, Alaska.

***Limatula subauriculata*** Montagu 1808, Test. Brit., Suppl., p. 63.

*References.* Whiteaves, 1901a, p. 119; Oldroyd, 1924, p. 64; Johnson, 1934, p. 27.

*Type Locality.* Great Britain.

*Range.* British Columbia to San Quentin Bay, Lower California. North Atlantic, Labrador to Nova Scotia, 15 to 50 fms.

Genus *Limea* Bronn 1831

***Limea subovata*** Jeffreys 1876, Ann. Mag. Nat. Hist., ser. 4, vol. 18, p. 427.

*References.* Johnson, 1915, p. 31; 1934, p. 27.

*Type Locality.* None designated in the original description.

*Range.* North Atlantic to off Martha's Vineyard, Massachusetts, 100 to 150 fms.

## Family ANOMIIDAE

Genus *Anomia* Linné 1758

***Anomia aculeata*** Müller 1776, Prodr. Zoöl. Danicae, p. 249.

*References.* Verrill, 1873, p. 697; Whiteaves, 1901a, p. 115; Johnson, 1915, p. 31; Johnson, 1934, p. 27; Foster, 1937, p. 102.

*Type Locality.* Denmark.

*Range.* Labrador to North Carolina, 1 to 80 fms.

***Anomia simplex*** d'Orbigny 1845, Moll. Cuba (Spanish ed.), vol. 2, p. 367.

*References.* Verrill, 1873, p. 696; Whiteaves, 1901a, p. 115; Johnson, 1915, p. 32; 1934, p. 27.

*Type Locality.* Cuba.

*Range.* Nova Scotia to the West Indies.

Genus *Pododesmus* Philippi 1837

***Pododesmus macroschisma*** Deshayes 1839, Revue Zoöl. Soc. Cuvierienne, p. 359.

*References.* Oldroyd, 1924, p. 65; Frizzell, 1930a, p. 104; Grant and Gale, 1931, p. 241.

*Type Locality.* Kamchatka.

*Range.* Southern Bering Sea to San Diego, California. Japan. Upper Miocene of Sooke, Vancouver Island; Pliocene of California; Pleistocene of California, Oregon, and Alaska.

Family MYTILIDAE

Genus *Botula* Mörch 1853

Subgenus *Adula* H. & A. Adams 1857

***Botula californiensis*** Philippi 1847, Zeitschr. Mal., p. 113.

*References.* Oldroyd, 1924, p. 71; Grant and Gale, 1931, p. 253.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Vancouver Island, British Columbia, to San Diego, California.

Genus *Crenella* Brown 1827

***Crenella columbiana*** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 4.

*Reference.* Oldroyd, 1924, p. 80.

*Type Locality.* Albatross Station 3324, off Chernoffski, Unalaska Island, Aleutians, 109 fms.

*Range.* Aleutian Islands to San Diego, California.

***Crenella decussata*** Montagu 1808, Test. Brit., Suppl., p. 69.

*References.* Whiteaves, 1901a, p. 122; Johnson, 1915, p. 35; Oldroyd, 1924, p. 79; Grant and Gale, 1931, p. 254; Johnson, 1934, p. 29.

*Type Locality.* Scottish Coast.

*Range.* Bering Sea to Puget Sound and San Pedro, California. Circumpolar. Greenland to North Carolina, 5 to 124 fms. Pleistocene of California.

***Crenella faba*** Müller 1776, Prodr. Zoöl. Danicae, p. 250.

*References.* Posselt, 1898, p. 22; Whiteaves, 1901a, p. 121; Lermond, 1923, p. 104; Johnson, 1934, p. 29.

*Type Locality.* ?

*Range.* Greenland to Maine, 5 to 300 fms.

***Crenella glandula*** Totten 1834, Amer. Jour. Sci., vol. 26, p. 367.

*References.* Verrill, 1873, p. 695; Whiteaves, 1901a, p. 122; Johnson, 1915, p. 34; Johnson, 1934, p. 29.

*Type Locality.* Provincetown Harbor, Massachusetts.

*Range.* Labrador to North Carolina, 3 to 60 fms.

***Crenella grisea*** Dall 1897, Smiths. Misc. Coll., vol. 50, p. 406.

*Reference.* Oldroyd, 1924, p. 80.

*Type Locality.* Off east end of Attu Island, 57 to 135 fms.

*Range.* Bering Sea to Sitka, Alaska.

**Crenella leana** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 4.

*Reference.* Oldroyd, 1924, p. 80.

*Type Locality.* Near Middleton Island, Alaska.

*Range.* Aleutian Islands, eastward to Middleton Island, Alaska.

**Crenella pectinula** Gould 1841, Rept. Inv. Mass., p. 127.

*References.* Whiteaves, 1901a, p. 121; Johnson, 1915, p. 34; 1934, p. 29.

*Type Locality.* Georges Bank.

*Range.* Gulf of St. Lawrence to Georges Bank.

#### Genus *Dacrydium* Torell 1859

**Dacrydium pacificum** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 405.

*Reference.* Oldroyd, 1924, p. 72.

*Type Locality.* Station 3604, Bering Sea, 1,401 fms.

*Range.* Known only from the type locality.

**Dacrydium vitreum** Möller 1842, Krøyer's Naturh. Tidskr., vol. 4, p. 92.

*References.* Whiteaves, 1901a, p. 120; Johnson, 1915, p. 40; 1934, p. 28.

*Type Locality.* Greenland.

*Range.* Arctic Ocean to Florida, 6 to 1,555 fms.

#### Genus *Modiolaria* Beck 1838

**Modiolaria corrugata** Stimpson 1851, Shells of New England, p. 12.

*References.* Gould, 1870, p. 193; Verrill, 1882b, p. 694; Whiteaves, 1901a, p. 121; Johnson, 1915, p. 34; Oldroyd, 1924, p. 77; Johnson, 1934, p. 29.

*Type Locality.* Massachusetts.

*Range.* Arctic Ocean to Puget Sound. Circumboreal. Greenland to North Carolina, 2 to 100 fms. Pleistocene of Quebec.

**Modiolaria impressa** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 172.

*Reference.* Oldroyd, 1924, p. 75.

*Type Locality.* Albatross Station 4677, Bering Sea, 52 fms.

*Range.* Petrel Bank, Bering Sea.

**Modiolaria laevigata** Gray 1824, Parry's First Voyage, Suppl. to App., p. 245.

*References.* Hancock, 1846, p. 334; Whiteaves, 1901a, p. 120; Johnson, 1934, p. 29.

*Type Locality.* None given in the original description.

*Range.* Hudson Strait (Whiteaves); Greenland and Labrador, 5 to 300 fms. (Johnson); Gulf of St. Lawrence to Bay of Fundy (Whiteaves). Pleistocene of Greenland and Quebec.



**Modiolaria marmorata** Forbes 1838, *Malac. Monensis*, p. 44.

*Reference.* Oldroyd, 1924, p. 77.

*Type Locality.* Not known to Oldroyd (1924).

*Range.* Puget Sound. Circumboreal.

**Modiolaria nigra nigra** Gray 1824, *Parry's First Voyage*, p. 244.

*References.* Hancock, 1846, p. 334; Gould, 1870, p. 191; Verrill, 1873, p. 694; Whiteaves, 1901a, p. 121; Johnson, 1915, p. 34; Oldroyd, 1924, p. 74; Grant and Gale, 1931, p. 254; Johnson, 1934, p. 29.

*Type Locality.* Orsund Bay, Sweden.

*Range.* Arctic Ocean to Oregon. Circumboreal. Greenland to North Carolina, 1 to 60 fms. Miocene of Alaska; Pleistocene of Labrador, Quebec, New Brunswick, and Maine.

**Modiolaria nigra obesa** Dall 1916, *Proc. U. S. Nat. Mus.*, vol. 52, p. 405.

*Reference.* Oldroyd, 1924, p. 74.

*Type Locality.* Plover Bay, near Bering Strait, 8 to 20 fms.

*Range.* Arctic Ocean to Cape Flattery.

**Modiolaria olivacea** Dall 1916, *Proc. U. S. Nat. Mus.*, vol. 52, p. 405.

*Reference.* Oldroyd, 1924, p. 75.

*Type Locality.* Off Bering Island, in 10 fms.

*Range.* Bering Sea to Catalina Island, California.

**Modiolaria phenax** Dall 1916, *Nautilus*, vol. 28, p. 138.

*Reference.* Oldroyd, 1924, p. 78.

*Type Locality.* St. George Island, Pribiloff Group, Bering Sea.

*Range.* Known only from the type locality.

**Modiolaria protracta** Dall 1916, *Proc. U. S. Nat. Mus.*, vol. 52, p. 405.

*Reference.* Oldroyd, 1924, p. 75.

*Type Locality.* North of Nunivak Island, Bering Sea, 9 fms., gravel.

*Range.* Nunivak Island, Bering Sea, to Monterey, California.

**Modiolaria seminuda** Dall 1897, *Bull. Nat. Hist. Soc. Brit. Col.*, No. 2, p. 5.

*Reference.* Oldroyd, 1924, p. 78.

*Type Locality.* Markoffski Bay, Alaska.

*Range.* Bering Sea to Forrester Island, Alaska.

**Modiolaria substriata** Gray 1824, *Parry's First Voyage*, Appendix, p. 245.

*References.* Gould, 1870, p. 192; Verrill, 1873, p. 694; Johnson, 1915, p. 33; Oldroyd, 1924, p. 76; Johnson, 1934, p. 29.

*Type Locality.* None given in the original description.

*Range.* Arctic Ocean to Puget Sound. Greenland to New York, 5 to 100 fms. Circumpolar.

**Modiolaria taylori** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 5.

*Reference.* Oldroyd, 1924, p. 76.

*Type Locality.* Victoria, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Modiolaria vernicosa** Middendorff 1849, Malac. Rossica, vol. 3, p. 20.

*References.* Dall, 1897, p. 5; Oldroyd, 1924, p. 78.

*Type Locality.* Not known.

*Range.* Bering Sea to Sitka, Alaska.

#### Genus *Modiolus* Lamarek 1799

**Modiolus modiolus** Linné 1758, Syst. Nat., ed. 10, p. 706.

*References.* Verrill, 1873, p. 693; Whiteaves, 1901a, p. 120; Johnson, 1915, p. 33; Oldroyd, 1924, p. 68; Grant and Gale, 1931, p. 249; Johnson, 1934, p. 27.

*Type Locality.* Mediterranean.

*Range.* Arctic Ocean to San Pedro, California. Circumboreal. Arctic Ocean to North Carolina. Pliocene of Oregon and California; Pleistocene of California and Quebec.

**Modiolus rectus flabellatus** Gould 1850, Boston Jour. Nat. Hist., vol. 3, p. 346.

*References.* Oldroyd, 1924, p. 68; Grant and Gale, 1931, p. 250.

*Type Locality.* Puget Sound.

*Range.* Vancouver Island to San Diego, California; Pleistocene of California.

#### Subgenus *Amygdalum* Megerle von Mühlfeld 1811

**Modiolus politus** Verrill and Smith 1880, Amer. Jour. Sci., ser. 3, vol. 20, p. 400.

*Reference.* Johnson, 1934, p. 28.

*Type Locality.* Station 895, lat. 39° 56' 30'' N., long. 70° 59' 45'' W., 238 fms., mud, fine sand, stones.

*Range.* North Atlantic to the West Indies, 111 to 1,000 fms.

#### Subgenus *Brachidontes* Swainson 1840

**Modiolus demissus plicatulus** Lamarek 1819, Anim. sans Vert., ed. 1, vol. 6, p. 113.

*References.* Verrill, 1873, p. 693; Whiteaves, 1901a, p. 120; Johnson, 1912, p. 132; 1915, p. 33; 1934, p. 28.

*Type Locality.* None given in the original description.

*Range.* Gaspé Bay to South Carolina.

Genus *Mytilus* Linné 1758

**Mytilus californianus** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 242.

*References.* Oldroyd, 1924, p. 66; Grant and Gale, 1931, p. 245; Young, 1941, pp. 90-91.

*Type Locality.* San Diego, California.

*Range.* Unalaska, Aleutian Islands, Alaska, to Socorro Islands, California. Pleistocene of California.

**Mytilus edulis edulis** Linné 1758, Syst. Nat., ed. 10, p. 705.

*References.* Verrill, 1873, p. 692; Whiteaves, 1901a, p. 120; Johnson, 1915, p. 32; Field, 1922, pp. 127-259; Oldroyd, 1924, p. 66; Coulthard, 1929, pp. 121-136; Atkins, 1931 (a and b), pp. 489-543, 545-566; Bouxin, 1931, pp. 1-11; Grant and Gale, 1931, p. 244; Lucas, 1931, pp. 195-203, pl. 1; Johnson, 1934, p. 27.

*Type Locality.* North Atlantic.

*Range.* Arctic Ocean to San Diego, California. Greenland to North Carolina. Pliocene of Alaska, Oregon, and England; Pleistocene of the Northwest Territories, Labrador, Quebec, Ontario, New Brunswick, and New England.

**Mytilus edulis pellucidus** Pennant 1777, Brit. Zoöl., vol. 4, p. 95.

*References.* Johnson, 1915, p. 32; 1934, p. 27.

*Type Locality.* Anglesea, England.

*Range.* "Locally associated with the typical form." (Johnson, 1934).

## Order Anomalodesmacea

## Family PERIPLOMATIDAE

Genus *Periploma* Schumacher 1817

**Periploma alaskana** Williams 1940, Jour. Entomol. and Zool., Claremont, California, vol. 32, p. 37, text-fig.

*Reference.* Salisbury, 1941, p. 62.

*Type Locality.* Arctic Ocean, 68° 37' N., 168° 53' W., in 32 fms.

*Range.* Known only from the type locality.

**Periploma fragilis** Totten 1835, Amer. Jour. Sci., vol. 28, p. 347.

*References.* Verrill, 1873, p. 673; Whiteaves, 1901a, p. 145; Johnson, 1915, p. 36; 1934, p. 30.

*Type Locality.* Newport Harbor, Rhode Island.

*Range.* Labrador to New Jersey, 4 to 29 fms.

Subgenus *Cochlodesma* Couthouy 1839

**Periploma leanum** Conrad 1831, Jour. Acad. Nat. Sci. Phila., vol. 6, p. 263.

*References.* Verrill, 1873, p. 673; Whiteaves, 1901a, p. 146; Johnson, 1915, p. 36; 1934, p. 30.

*Type Locality.* "Inhabits the northern coast of the U. S." (Conrad, 1831).

*Range.* Gulf of St. Lawrence to North Carolina, 3 to 16 fms.

Family THRACIIDAE

Genus *Thracia* Blainville 1824

***Thracia beringi*** Dall 1915, Proc. U. S. Nat. Mus., vol. 49, p. 442.

*Reference.* Oldroyd, 1924, p. 85.

*Type Locality.* Commander Islands, Bering Sea.

*Range.* Bering Sea, Aleutian Islands, and southward to Sitka, Alaska.

***Thracia challisiana*** Dall 1915, Proc. U. S. Nat. Mus., vol. 49, p. 443.

*Reference.* Oldroyd, 1924, p. 84.

*Type Locality.* San Juan Island, Washington.

*Range.* Forrester Island, Alaska, to the Gulf of Georgia.

***Thracia conradi*** Couthouy 1839, Boston Jour. Nat. Hist., vol. 2, p. 153.

*References.* Verrill, 1873, p. 673; Whiteaves, 1901a, p. 146; Morse, 1913, p. 73; Johnson, 1915, p. 36; 1934, p. 30.

*Type Locality.* Coast of New England.

*Range.* Labrador to North Carolina, 3 to 16 fms.

***Thracia curta*** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 248.

*References.* Oldroyd, 1924, p. 84; Grant and Gale, 1931, p. 258.

*Type Locality.* Near Santa Barbara, California.

*Range.* Icy Cape, Arctic Ocean, Bering Sea to Lower California; Pliocene of Alaska.

***Thracia myopsis*** Möller 1842, Krøyer's Naturh. Tidskr., vol. 4, p. 94.

*References.* Whiteaves, 1901a, p. 146; Johnson, 1915, p. 37; 1934, p. 30.

*Type Locality.* Greenland.

*Range.* Greenland to Massachusetts, 10 to 50 fms.

***Thracia septentrionalis*** Jeffreys 1872, Ann. Mag. Nat. Hist., ser. 4, vol. 10, p. 238.

*References.* Verrill, 1873, p. 674; Posselt, 1898, p. 89; Whiteaves, 1901a, p. 146; Johnson, 1934, p. 30.

*Type Locality.* None given.

*Range.* Greenland, 60 fms., to off Block Island, Rhode Island, 29 fms.

*Synonym.* *Thracia truncata* Mighels and Adams, *non* Brown.

**Thracia trapezoides** Conrad 1840, Wilkes Exped., p. 723.

*References.* Oldroyd, 1924, p. 84; Grant and Gale, 1931, p. 257.

*Type Locality.* Astoria, Oregon, Miocene.

*Range.* Craig, Prince of Wales Island, Alaska; Puget Sound; Oligocene of Washington; Miocene of Washington and Oregon; Pliocene of Oregon and California; Pleistocene of California.

#### Family PANDORIDAE

##### Genus *Pandora* Hwass 1795

**Pandora neaeroides** Seguenza 1876, Boll. R. Comitato Geologico d'Italia, vol. 7, p. 270.

*Reference.* Johnson, 1934, p. 31.

*Type Locality.* Pliocene, Italy.

*Range.* North Atlantic and off Virginia, 122 to 635 fms. Gulf of Mexico, 114 fms.

##### Subgenus *Clidiphora* Carpenter 1855

**Pandora gouldiana** Dall 1886, Bull. Mus. Comp. Zoöl. vol. 12, p. 312.

*References.* Whiteaves, 1901a, p. 144; Johnson, 1915, p. 37; 1934, p. 31.

*Type Locality.* New England.

*Range.* Prince Edward Island to North Carolina, 0 to 30 fms.

##### Subgenus *Heteroclidus* Dall 1915

**Pandora punctata** Conrad 1837 (*non* Carpenter 1864), Jour. Acad. Nat. Sci. Phila., vol. 7, p. 228.

*References.* Oldroyd, 1924, p. 90; Grant and Gale, 1931, p. 262.

*Type Locality.* Near Santa Barbara, California.

*Range.* Vancouver Island to the Gulf of California. Miocene?, Pliocene, and Pleistocene of California.

##### Subgenus *Kennerlia* Carpenter 1864

**Pandora bilirata** Conrad 1855, Pacific R. R. Surveys, Reports, vol. 6, pl. 5, fig. 25.

*References.* Oldroyd, 1924, p. 89; Grant and Gale, 1931, p. 261.

*Type Locality.* California.

*Range.* Forrester Island, Alaska, to Point Abreojos, Lower California. Pleistocene of California.

**Pandora filosa** Carpenter 1864, Proc. Zoöl. Soc. London, 1864, p. 602.

*References.* Oldroyd, 1924, p. 88; Grant and Gale, 1931, p. 261.

*Type Locality.* Puget Sound.

*Range.* Nunivak Island, Bering Sea, to San Pedro, California. Pleistocene of California.

**Pandora forresterensis** Willett 1918, Nautilus, vol. 31, p. 134.

*Reference.* Oldroyd, 1924, p. 90.

*Type Locality.* Forrester Island, Alaska.

*Range.* Known only from the type locality.

**Pandora glacialis glacialis** Leach 1819, Jour. Phys., vol. 88, p. 465.

*References.* Whiteaves, 1901a, p. 144; Oldroyd, 1924, p. 89; Grant and Gale, 1931, p. 262; Johnson, 1934, p. 31.

*Type Locality.* Spitsbergen.

*Range.* Arctic Ocean to Straits of Juan de Fuca. Gulf of St. Lawrence and off Martha's Vineyard, Massachusetts, 45 to 100 fms. Pliocene of California.

**Pandora glacialis eutaenia** Dall 1915, Proc. U. S. Nat. Mus., vol. 49, p. 449.

*Reference.* Oldroyd, 1924, p. 89.

*Type Locality.* Port Etches, Alaska.

*Range.* Port Etches to Sitka, Alaska.

**Pandora grandis** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 11.

*References.* Rivers, 1902, p. 69; Oldroyd, 1924, p. 87; Grant and Gale, 1931, p. 261.

*Type Locality.* Unalaska, Alaska.

*Range.* Pribiloff Islands, Bering Sea, to San Pedro, California. Miocene of Alaska; Pliocene and Pleistocene of California.

#### Family LYONSIIDAE

##### Genus *Lyonsia* Turton 1822

**Lyonsia arenosa** Möller 1842, Index Moll. Grönl., p. 20.

*References.* Whiteaves, 1901a, p. 145; Johnson, 1915, p. 38; Oldroyd, 1924, p. 92; Grant and Gale, 1931, p. 264; Johnson, 1934, p. 31.

*Type Locality.* Greenland.

*Range.* Arctic Sea to Japan and the Okhotsk Sea, to the Aleutian and Kodiak Islands, Alaska. Circumboreal. Greenland to Cape Ann, Massachusetts, 13 to 60 fms. Miocene of Alaska; Pleistocene of Quebec, Maine, and New Brunswick.

**Lyonsia californica** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 248.

*References.* Oldroyd, 1924, p. 91; Grant and Gale, 1931, p. 263.

*Type Locality.* Near Santa Barbara, California.

*Range.* Puget Sound to Manuel's Lagoon, Lower California. Pliocene and Pleistocene of California.

**Lyonsia granulifera** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 818.

*Reference.* Johnson, 1934, p. 31.

*Type Locality.* Station 2492, N. lat. 45° 22', W. long. 58° 43' 45'', in 75 fms.

*Range.* Off Labrador, 75 fms.

**Lyonsia hyalina** Conrad 1831, Jour. Acad. Nat. Sci. Phila., vol. 6, p. 261.

*References.* Verrill, 1873, p. 672; Whiteaves, 1901a, p. 145; Johnson, 1915, p. 38; 1934, p. 31.

*Type Locality.* Northern coast of the United States.

*Range.* Gulf of St. Lawrence to Texas.

**Lyonsia pugetensis** Dall 1913, Proc. U. S. Nat. Mus., vol. 45, p. 595.

*Reference.* Oldroyd, 1924, p. 91.

*Type Locality.* Coast of Washington.

*Range.* Chignik Bay, Alaska, to Puget Sound.

**Lyonsia striata** Montagu 1815, Trans. Linn. Soc., vol. 2, p. 188.

*Reference.* Oldroyd, 1924, p. 92.

*Type Locality.* "Atlantic".

*Range.* Aleutian Islands to Juan de Fuca Straits. Circumboreal.

#### Section *Agriodesma* Dall 1909

**Lyonsia saxicola** Baird 1863, Proc. Zool. Soc. London, p. 70.

*Reference.* Oldroyd, 1924, p. 93.

*Type Locality.* Esquimalt Harbour, Vancouver Island, British Columbia.

*Range.* Aleutian Islands to San Pedro, California.

**Lyonsia scammoni** Dall 1871, Amer. Jour. Conch., vol. 7, p. 142.

*Reference.* Oldroyd, 1924, p. 93.

*Type Locality.* Port Simpson, British Columbia.

*Range.* Port Simpson, British Columbia, to San Diego, California.

#### Subgenus *Entodesma* Philippi 1845

**Lyonsia inflata** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 248.

*Reference.* Oldroyd, 1924, p. 93.

*Type Locality.* Guayaquil, Ecuador.

*Range.* In sponges, Vancouver Island, British Columbia, to Ecuador.

#### Genus *Mytilimeria* Conrad 1837

**Mytilimeria nuttallii** Conrad 1837, Jour. Acad. Nat. Sci. Phila. vol. 7, p. 247.

*References.* Oldroyd, 1924, p. 94; Grant and Gale, 1931, p. 264.

*Type Locality.* Coast of California.

*Range.* Vancouver Island to Lower California; Miocene? of California; Pleistocene of California.



## Family POROMYACIDAE

Genus *Cetoconcha* Dall 1886

***Cetoconcha malespinae*** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 407.

*Reference.* Oldroyd, 1924, p. 96.

*Type Locality.* Station 2859, southwest of Sitka Bay, Alaska, 1,569 fms.

*Range.* Known only from the type locality.

Genus *Poromya* Forbes 1844

***Poromya granulata granulata*** Nyst and Westendorp 1839, Nouv. Rech. coq. foss. d'Anvers, p. 6.

*References.* Johnson, 1915, p. 39; 1934, p. 32.

*Type Locality.* Belgium (fossil).

*Range.* North Atlantic and off North Carolina and Florida Keys, 15 to 300 fms.

***Poromya granulata rotundata*** Jeffreys 1876, Ann. Mag. Nat. Hist., 4th ser., vol. 18, p. 494.

*References.* Johnson, 1915, p. 39; 1934, p. 32.

*Type Locality.* North Atlantic, 1,450 fms.

*Range.* North Atlantic and off North Carolina, Georgia and West Indies, 50 to 1,450 fms.

Section *Cetomya* Dall 1889

***Poromya tornata*** Jeffreys 1876, Ann. Mag. Nat. Hist., 4th ser., vol. 18, p. 494.

*Reference.* Johnson, 1934, p. 32.

*Type Locality.* Station 16, 1,785 fms., Valorous Expedition.

*Range.* North Atlantic to West Indies, 1,140 to 1,785 fms.

Subgenus *Dermatomya* Dall 1913

***Poromya beringiana*** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 406.

*Reference.* Oldroyd, 1924, p. 95.

*Type Locality.* Bowers Bank, Bering Sea, 557 fms.

*Range.* Aleutian Islands to Tillamook, Oregon.

***Poromya leonina*** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 406.

*Reference.* Oldroyd, 1924, p. 96.

*Type Locality.* Station 3074, off Sea Lion Rock, coast of Washington, 877 fms.

*Range.* Known only from the type locality.

**Poromya tenuiconcha** Dall 1913, Proc. U. S. Nat. Mus., vol. 45, p. 596.

*Reference.* Oldroyd, 1924, p. 95.

*Type Locality.* Off Monterey Bay, California.

*Range.* Alaska Peninsula to Lower California, in deep water.

#### Family LYONSIELLIDAE

Genus *Lyonsiella* M. Sars 1872

**Lyonsiella alaskana** Dall 1894, Proc. U. S. Nat. Mus., vol. 17, p. 703.

*Reference.* Oldroyd, 1924, p. 97.

*Type Locality.* Station 2859, in 1,659 fms., green ooze, southwest of Sitka, Alaska.

*Range.* Southwest of Sitka, Alaska, to off Catalina Island, California.

#### Family CUSPIDARIIDAE

Genus *Cuspidaria* Nardo 1840

**Cuspidaria apodema** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 407.

*Reference.* Oldroyd, 1924, p. 98.

*Type Locality.* Station 2859, southwest of Sitka Bay, Alaska.

*Range.* Off Sitka, Alaska, to Panama Bay, deep water.

**Cuspidaria arctica** Sars 1878, Moll. Reg. Arct. Norv., p. 85.

*References.* Verrill and Bush, 1898, p. 803; Whiteaves, 1901a, p. 147; Johnson, 1934, p. 33.

*Type Locality.* Vadsø, Norway.

*Range.* Arctic Ocean to Nova Scotia, 190 fms., and off Florida, 294 fms.

**Cuspidaria glacialis** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 45.

*References.* Verrill and Bush, 1898, p. 800; Whiteaves, 1901a, p. 147; Johnson, 1915, p. 41; Oldroyd, 1924, p. 98; Johnson, 1934, p. 33.

*Type Locality.* Vadsø, Norway.

*Range.* Off San Diego, California, 239 fms. Gulf of St. Lawrence to Florida, 64 to 1,467 fms.

**Cuspidaria obesa** Lovén 1846, Index Moll. Scand. Occid., p. 48.

*References.* Verrill and Bush, 1898, p. 804; Johnson, 1915, p. 40; 1934, p. 33.

*Type Locality.* Bohus.

*Range.* Arctic Ocean to the West Indies, 20 to 1,290 fms.

**Cuspidaria pellucida** Stimpson 1853, Smiths. Contr. to Knowl., vol. 6, art. 5, p. 21.

*References.* Verrill and Bush, 1898, p. 805; Whiteaves, 1901a, p. 147; Johnson, 1915, p. 40; 1934, p. 33.

*Type Locality.* Off Long Island, New York.

*Range.* Gulf of St. Lawrence to Casco Bay, Maine, 40 to 95 fms.

**Cuspidaria rostrata** Spengler 1793, Skriv. Nat.-Selsk. Kjobenhavn, vol. 3, pt. 1, p. 42.

*References.* Verrill, 1882b, p. 562; *ibid.*, and Bush, 1898, p. 800; Johnson, 1915, p. 41; 1934, p. 33.

*Type Locality.* Bergen, Norway.

*Range.* Arctic Ocean to the West Indies, 65 to 1,639 fms.

**Cuspidaria subtorta** Sars 1878, Moll. Reg. Arct. Norv., p. 87.

*References.* Posselt, 1898, p. 89; Verrill and Bush, 1898, p. 806; Johnson, 1934, p. 33.

*Type Locality.* None given by Sars.

*Range.* Off Nova Scotia, 130 fms.

#### Subgenus *Cardiomya* A. Adams 1864

**Cuspidaria beringensis** Leche 1883, Vega Exped., Vet. Arb., vol. 3, p. 438.

*Reference.* Oldroyd, 1924, p. 100.

*Type Locality.* Bering Sea?

*Range.* Bering Sea to Panama Bay.

**Cuspidaria californica** Dall 1886, Bull. Mus. Comp. Zool., No. 12, p. 296.

*Reference.* Oldroyd, 1924, p. 101.

*Type Locality.* Catalina Island, California.

*Range.* Puget Sound to San Diego, California.

**Cuspidaria oldroydi** Dall 1924, Publ. Puget Sound Biol. Sta., vol. 4, p. 33.

*Reference.* Oldroyd, 1924, p. 101.

*Type Locality.* Puget Sound.

*Range.* Vancouver Island, British Columbia, to Puget Sound.

**Cuspidaria pectinata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci., for 1863 p. 637.

*References.* Oldroyd, 1924, p. 101; Grant and Gale, 1931, p. 265.

*Type Locality.* Puget Sound.

*Range.* Puget Sound to Panama Bay; Pleistocene of California.

**Cuspidaria planetica** Dall 1908, Bull. Mus. Comp. Zool., No. 12, p. 296.

*Reference.* Oldroyd, 1924, p. 99.

*Type Locality.* Albatross Station 2985, off San Diego, California.

*Range.* Pribiloff Islands, Bering Sea, to the Coronado Islands, Lower California.

**Cuspidaria striata** Jeffreys 1876, Ann. Mag. Nat. Hist., vol. 18, p. 495.

*Reference.* Johnson, 1934, p. 34.

*Type Locality.* None given. See remarks, below.

*Range.* Arctic Ocean to Florida Strait, 85 to 1,450 fms.

*Remarks.* The original description mentions three localities: "station 12, 1,450 fms.; 13, 690 fms; "Challenger" Expedition, off Bermuda, 435 fms."

Genus *Leiomya* A. Adams 1864

Subgenus *Plectodon* Carpenter 1864

**Leiomya scabra** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 638.

*Reference.* Oldroyd, 1924, p. 103.

*Type Locality.* Catalina Island, California, 40 to 60 fms.

*Range.* Puget Sound to San Diego, California.

### Order **Teleodesmacea**

#### Family **PLEUROPHORIDAE**

Genus *Cyprina* Lamarck 1818

**Cyprina islandica** Linné 1758, Syst. Nat., 10th ed., p. 1131.

*References.* Verrill, 1873, p. 683; Whiteaves, 1901a, p. 130; Johnson, 1915, p. 42; 1934, p. 36.

*Type Locality.* Iceland.

*Range.* Arctic Ocean to North Carolina, 6 to 90 fms.

*Remarks.* Whiteaves (1901) notes that this species has not been found "so far" in the Gulf of St. Lawrence north of the Baie des Chaleurs.

#### Family **ASTARTIDAE**

Genus *Astarte* Sowerby 1816

**Astarte banksii** Leach 1819, Ross' First Voyage, Appendix, p. 176.

*References.* Posselt, 1898, p. 68; Whiteaves, 1901a, p. 133; Johnson, 1934, p. 37.

*Type Locality.* Not given by Leach who says: "Baffin's Bay, amongst soundings. Received also from the Spitzbergen Coast."

*Range.* Baffin Bay, 12 to 60 fms. (Johnson); Greenland to Nova Scotia; Pleistocene of Labrador, New Brunswick, and Maine (Whiteaves).

**Astarte castanea castanea** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 273.

*References.* Verrill, 1873, p. 685; Whiteaves, 1901a, p. 133; Johnson, 1915, p. 42; 1934, p. 36.

*Type Locality.* Coast of New Jersey.

*Range.* Nova Scotia to Cape Hatteras, North Carolina, 5 to 65 fms.

**Astarte compacta** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 642.

*Reference.* Oldroyd, 1924, p. 104.

*Type Locality.* Puget Sound.

*Range.* Forrester Island, Alaska, to Puget Sound.

**Astarte crenata** Gray 1824, Parry's First Voyage, Suppl. to Appendix, p. 242.

*References.* Posselt, 1898, p. 64; Whiteaves, 1901a, p. 132; Johnson, 1934, p. 36.

*Type Locality.* None given by Gray.

*Range.* Greenland to the Gulf of St. Lawrence, 16 to 500 fms., and Minas Basin, Nova Scotia (A. H. Leim).

**Astarte elliptica** Brown 1827, Illustr. Conchol., pl. 18, fig. 3.

*References.* Whiteaves, 1901a, p. 131 (*A. compressa*); Johnson, 1915, p. 45; 1934, p. 37.

*Type Locality.* Firth of Forth and Greenock.

*Range.* Arctic Seas near Greenland to Massachusetts Bay, 8 to 90 fms. Pleistocene of Labrador, Quebec, and Maine.

**Astarte laurentiana laurentiana** Lyell 1845, Travels in North America, London, 1845, Amer. ed., vol. 2, pp. 125-126.

*Reference.* Johnson, 1934, p. 37.

*Type Locality.* Beauport, Quebec (the only locality given in the original description).

*Range.* Pleistocene beds of eastern Canada and New England.

**Astarte laurentiana soror** Dall 1903, Proc. U. S. Nat. Mus., vol. 26, p. 947.

*Reference.* Johnson, 1934, p. 37.

*Type Locality.* Godhavn Harbor, Disco Island, Greenland.

*Range.* From N. latitude 82° to the Gulf of St. Lawrence, 5 to 90 fms.

**Astarte polaris** Dall 1903, Proc. U. S. Nat. Mus., vol. 26, pp. 939, 945-946.

*References.* Oldroyd, 1924, p. 104; Johnson, 1934, p. 36.

*Type Locality.* Near Shumagin Islands, Alaska.

*Range.* Aleutian Islands and Shumagin Islands, Alaska; circumboreal; Davis Straits, 90 fms.

**Astarte pulchella** Jonas 1845 (*vide* Johnson 1934).

*Reference.* Johnson, 1934, p. 37.

*Type Locality.* ?

*Range.* Cumberland Inlet and adjacent Arctic waters, 5 to 10 fms.

*Remarks.* Probably described in *Zeitschr. für Malak.*, 1845, but that reference is not available to me.

**Astarte quadrans quadrans** Gould 1841, Rept. Inv. Mass., p. 81.

*References.* Verrill, 1873, p. 685; Whiteaves, 1901a, p. 133; Johnson, 1915, p. 43; Blake, 1917, p. 132; Johnson, 1934, p. 37.

*Type Locality.* Massachusetts Bay.

*Range.* Gulf of St. Lawrence to Long Island Sound, 6 to 40 fms.

**Astarte quadrans portlandica** Mighels 1843, Boston Jour. Nat. Hist., vol. 4, p. 320.

*References.* Verrill, 1873, p. 685; Johnson, 1915, p. 43.

*Type Locality.* Casco Bay, Maine.

*Range.* Casco Bay; Frenchman's Bay, Maine.

**Astarte striata** Leach 1819, Ross's Voyage, Appendix 2, p. 176.

*References.* Whiteaves, 1901a, p. 134; Johnson, 1915, p. 45; 1934, p. 37.

*Type Locality.* Latitude 76° 42' N., longitude 76° W.

*Range.* Davis Strait to Massachusetts Bay, 10 to 85 fms.

**Astarte subaequilatera subaequilatera** Sowerby 1854, Thes. Conch., vol. 2, pt. 2, p. 780.

*References.* Johnson, 1915, p. 44; 1934, p. 36.

*Type Locality.* Newfoundland.

*Range.* Labrador to Florida, 22 to 410 fms.

**Astarte subaequilatera whiteavesii** Dall 1903, Proc. U. S. Nat. Mus., vol. 26, pp. 939, 948.

*References.* Whiteaves, 1901a, p. 132 (*A. crebricosta*); Johnson, 1915, p. 44; 1934, p. 36.

*Type Locality.* Gaspé, Quebec, 200 fms.

*Range.* Gulf of St. Lawrence to Long Island Sound, 67 to 428 fms.

**Astarte undata** Gould 1841, Rept. Inv. Mass., p. 80.

*References.* Verrill, 1873, p. 684; Whiteaves, 1901a, p. 131; Johnson, 1915, p. 43; 1934, p. 36.

*Type Locality.* New England.

*Range.* Labrador south to the deep cold water off Chesapeake Bay, 5 to 104 fms.

*Remarks.* Whiteaves (1901) says that the species is "not known to occur as far to the northward as Miramichi Bay."

**Astarte willetti** Dall 1917, Nautilus, vol. 31, p. 10.

*Reference.* Oldroyd, 1924, p. 105.

*Type Locality.* Forrester Island, Alaska.

*Range.* Known only from the type locality.

Section *Rictocyma* Dall 1872

**Astarte esquimalti** Baird 1863, Proc. Zoöl. Soc. London, p. 70.

*Reference.* Oldroyd, 1924, p. 108.

*Type Locality.* Esquimalt Harbour, Vancouver Island, British Columbia.

*Range.* Aleutian Islands to Puget Sound.

Section *Tridonta* Schumacher

**Astarte acuticostata** Jeffreys and Friele 1877, Nyt. Mag. Naturv. vol. 23, p. 1.

*Reference.* Dall, 1903, p. 941.

*Type Locality.* None given.

*Range.* Arctic Atlantic, in deep water; Jan Mayen and Novaia Zemlia, in 200 to 649 fms.

**Astarte alaskensis** Dall 1903, Proc. U. S. Nat. Mus., vol. 26, p. 946.

*References.* Oldroyd, 1924, p. 106; Grant and Gale, 1931, p. 268.

*Type Locality.* Northwest of Unimak Island, southern part of Bering Sea, 70 fms.

*Range.* Herschell Island, Arctic Coast, south to Bering Sea, the Aleutians, and south to Puget Sound.

**Astarte arctica** Gray 1824, Appendix, Parry's Voyage, p. 243.

*References.* Oldroyd, 1924, p. 106; Grant and Gale, 1931, p. 267; Johnson, 1934, p. 37.

*Type Locality.* "Northern Seas".

*Range.* Arctic and Bering Seas and the Aleutian Islands. Circumboreal. Greenland and Davis Straits, 15 to 60 fms.

*Remarks.* Whiteaves (1901a, p. 130) records *A. lactea* Brod. and Sowerby (Hudson Straits to Nova Scotia) which should possibly be referred to *A. arctica* according to Dall (Proc. U. S. Nat. Mus., vol. 26, pp. 933-951).

**Astarte bennetti** Dall 1903, Proc. U. S. Nat. Mus., vol. 26, p. 946.

*Reference.* Oldroyd, 1924, p. 107.

*Type Locality.* Bennett Island, northern Bering Sea.

*Range.* Polar Sea at Bennett Island, and south in Bering Sea to Nunivak Island.

**Astarte borealis** Schumacher 1817, Essai Nouv. Syst. Hab. Vers Test., p. 47, pl. 17, fig. 1.

*References.* Johnson, 1915, p. 44; Oldroyd, 1924, p. 106; Grant and Gale, 1931, p. 267; Johnson, 1934, p. 37.

*Type Locality.* Not known, according to Oldroyd.

*Range.* Polar and Bering Seas to Prince William Sound, Alaska. Greenland to Massachusetts Bay, 15 to 100 fms.



**Astarte fabula** Reeve 1855, Last of the Arctic Voyages, vol. 2, p. 398.

*References.* Oldroyd, 1924, p. 107; Grant and Gale, 1931, p. 268; Johnson, 1934, p. 37.

*Type Locality.* Arctic.

*Range.* Arctic Sea, Bering Sea, Nunivak Island. Circumboreal. Greenland, 12 to 90 fms.

**Astarte globosa** Möller 1842, Index Moll. Grönl., p. 20.

*References.* Whiteaves, 1901a, p. 134; Oldroyd, 1924, p. 108; Johnson, 1934, p. 37.

*Type Locality.* Greenland?

*Range.* Arctic Coast; Greenland, 10 to 150 fms. (Johnson). North shore of the Gulf of St. Lawrence to Gaspé Bay (Whiteaves).

**Astarte rollandi rollandi** Bernardi 1858, Jour. de Conchyl., vol. 7, p. 386.

*References.* Oldroyd, 1924, p. 105; Grant and Gale, 1931, p. 268.

*Type Locality.* Petropavloski, Kamchatka.

*Range.* Pribilof and Aleutian Islands to Prince William Sound, Alaska

**Astarte rollandi loxia** Dall 1903, Proc. U. S. Nat. Mus., vol. 26, p. 943.

*References.* Oldroyd, 1924, p. 105; Grant and Gale, 1931, p. 268.

*Type Locality.* Semidi Islands, Alaska.

*Range.* Chika, the Semidis, and Middleton Islets, Alaska.

**Astarte vernicosa** Dall 1903, Proc. U. S. Nat. Mus., vol. 26, p. 948.

*Reference.* Oldroyd, 1924, p. 107.

*Type Locality.* Off Icy Cape, Arctic Ocean.

*Range.* Arctic and Bering Seas to the Attu-Atka Islands in the Aleutian chain, Alaska.

#### Family CARDITIDAE

##### Genus *Calypptogena* Dall 1891

**Calypptogena pacifica** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 190.

*References.* Oldroyd, 1924, p. 116; Grant and Gale, 1931, p. 278.

*Type Locality.* Albatross Station 3077, off Dixon Entrance, Alaska, 322 fms.

*Range.* Clarence Strait, Alaska, to Santa Barbara channel, California. Pliocene, California.

##### Genus *Cardita* (Bruguière) Lamarck 1799

**Cardita crassidens** Broderip and Sowerby 1829, Zoöl. Jour., vol. 4, p. 365.

*References.* Oldroyd, 1924, p. 113; Grant and Gale, 1931, p. 274.

*Type Locality.* Icy Cape, Arctic Ocean.

*Range.* Arctic and Bering Seas and eastward; Kodiak Island, Alaska. Pliocene of Alaska.

***Cardita crebricostata*** Krause 1885, *Archiv. für Naturg.*, vol. 51, p. 30.

*References.* Oldroyd, 1924, p. 114; Grant and Gale, 1931, p. 273.

*Type Locality.* St. Paul Island, Alaska.

*Range.* Point Barrow, Alaska, to Monterey, California; Pleistocene of Alaska.

***Cardita umnaka*** Willett 1932, *Trans. San Diego Soc. Nat. Hist.*, vol. 7, p. 87.

*Type Locality.* Umnak Island, Alaska.

*Range.* Known only from the type locality.

***Cardita stearnsii*** Dall 1902, *Proc. Acad. Nat. Sci. Phila.*, 1902, p. 709.

*References.* Oldroyd, 1924, p. 112; Grant and Gale, 1931, p. 272.

*Type Locality.* Puget Sound.

*Range.* Known only from the type locality.

*Remarks.* A synonym of *C. ventricosa* Gould, *vide* Grant and Gale.

***Cardita ventricosa*** Gould 1850, *Proc. Boston Soc. Nat. Hist.*, vol. 3, p. 276.

*References.* Oldroyd, 1924, p. 114; Grant and Gale, 1931, p. 272.

*Type Locality.* Puget Sound.

*Range.* Belkoffski Bay, Alaska, to the Coronado Islands, and Cortez Bank. Miocene of Washington and California; Pliocene and Pleistocene of California.

#### Subgenus *Miodontiscus* Dall 1903

***Cardita prolongata*** Carpenter 1864, *Rept. Brit. Assoc. Adv. Sc.* for 1863, p. 642.

*References.* Oldroyd, 1924, p. 115; Grant and Gale, 1931, p. 276.

*Type Locality.* Near Neah Bay, Washington.

*Range.* Middleton Island, Alaska, to San Diego, California. Pleistocene of California.

#### Genus *Glans* Megerle von Mühlfeld 1811

***Glans minuscula*** Grant and Gale 1931, *San Diego Soc. Nat. Hist.*, Mem. 1, p. 277.

*Reference.* Oldroyd, 1924, p. 110.

*Type Locality.* Locality 78, San Diego Society of Natural History, Pleistocene terrace near Seacliff, Ventura County, California.

*Range.* Queen Charlotte Islands, British Columbia, to Lower California. Pleistocene of California.

*Synonym.* *Cardita subquadrata* Carpenter 1865.

Genus *Venericardia* Lamareck 1801Section *Cyclocardia* Conrad 1867

**Venericardia borealis borealis** Conrad 1831, Amer. Marine Conch., p. 39.

*References.* Gould, 1870, p. 146; Verrill, 1873, p. 683; Whiteaves, 1901a, p. 135; Johnson, 1915, p. 60; 1934, p. 38.

*Type Locality.* Massachusetts.

*Range.* Hudson Strait to off Cape Hatteras, N.C., 3 to 250 fms. Pleistocene of Labrador.

**Venericardia borealis novangliae** Morse 1869, First Ann. Rept. Peabody Acad. Sci., p. 76.

*References.* Verrill, 1873, p. 684; Johnson, 1915, p. 61; 1934, p. 38.

*Type Locality.* New England.

*Range.* Newfoundland to Cape Cod, Massachusetts.

**Venericardia incisa** Dall 1902, Proc. Acad. Nat. Sci. Phila., 1902, p. 714.

*Reference.* Oldroyd, 1924, p. 115.

*Type Locality.* Unalaska, Alaska.

*Range.* Unalaska, Alaska, to Semidi Islands, Alaska.

**Venericardia paucicostata** Krause 1885, Archiv. für Naturg., vol. 51, p. 30.

*Reference.* Oldroyd, 1924, p. 112.

*Type Locality.* Emmahafen.

*Range.* Arctic Sea to Straits of Juan de Fuca.

## Family THYASIRIDAE

Genus *Axinopsis* G. O. Sars 1878

**Axinopsis orbiculatus orbiculatus** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 63.

*References.* Johnson, 1915, p. 65; 1934, p. 40.

*Type Locality.* Vadsø, Norway.

*Range.* Greenland to Casco Bay, Maine, 10 to 30 fms.

**Axinopsis orbiculatus inaequalis** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 794.

*References.* Johnson, 1915, p. 65; 1934, p. 40.

*Type Locality.* Bay of Fundy.

*Range.* Bay of Fundy and Gulf of Maine, 18 to 26 fms.

**Axinopsis sericatus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 643.

*Reference.* Oldroyd, 1924, p. 123.

*Type Locality.* Catalina Island, California.

*Range.* Aleutian Islands, Alaska, to Catalina Island, California.

**Axinopsis viridis** Dall 1901, Proc. U. S. Nat. Mus., vol. 23, p. 819.

*Reference.* Oldroyd, 1924, p. 123.

*Type Locality.* Plover Bay, Bering Strait.

*Range.* Arctic Ocean and east Aleutian Islands to the Coronado Islands, Lower California. Japan.

Genus *Leptaxinus* Verrill and Bush 1898

**Leptaxinus incrassatus** Jeffreys 1876, Ann. Mag. Nat. Hist., vol. 18, p. 492.

*Reference.* Johnson, 1934, p. 40.

*Type Locality.* None given.

*Range.* Baffin Bay and North Atlantic, 1,480 to 1,785 fms.

Genus *Thyasira* Leach 1818

**Thyasira barbarensis** Dall 1889, Proc. U. S. Nat. Mus., vol. 12, p. 261.

*Reference.* Oldroyd, 1924, p. 120.

*Type Locality.* Station 2840, Santa Barbara Islands, California.

*Range.* Strait of Juan de Fuca to the Gulf of California.

**Thyasira bisecta** Conrad 1849, Rept. U. S. Expl. Exped., vol. 10, p. 724.

*References.* Dall, 1919a, p. 103; Oldroyd, 1924, p. 120; Grant and Gale, 1931, p. 281.

*Type Locality.* Miocene of Astoria, Oregon.

*Range.* Off Alaska Peninsula to Oregon; Oligocene of Washington; Miocene of Oregon and Alaska; Pliocene of California; Pleistocene of California.

**Thyasira croulinensis** Jeffreys 1847, Ann. Mag. Nat. Hist. (1) vol. 20, p. 19.

*References.* Verrill and Bush, 1898, p. 786; Johnson, 1934, p. 39.

*Type Locality.* Croulin Island, between Skye and the mainland of Ross-shire.

*Range.* West Greenland, 199 fms.; off Bermuda, 435 fms.

**Thyasira cygnus** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 409.

*Reference.* Oldroyd, 1924, p. 121.

*Type Locality.* Station 4224, Cygnet Inlet, Boca de Quadra, Alaska, in 160 fms.

*Range.* Southeastern Alaska.

**Thyasira equalis** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 788.

*References.* Johnson, 1915, p. 64; 1934, p. 39.

*Type Locality.* None given.

*Range.* Nova Scotia to Chesapeake Bay, 94 to 1,537 fms.

**Thyasira gouldii** Philippi 1845, Zeitschr. Malak., vol. 2, p. 74.

*References.* Verrill, 1873, p. 686; Whiteaves, 1901a, p. 137; Johnson, 1915, p. 63; Oldroyd, 1924, p. 120; Grant and Gale, 1931, p. 281; Johnson, 1934, p. 39.

*Type Locality.* Massachusetts Bay.

*Range.* Bering Strait to San Diego, California. Greenland to Connecticut, 5 to 400 fms. Pleistocene and Pliocene of California and Quebec.

**Thyasira inaequalis** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 791.

*References.* Whiteaves, 1901a, p. 138; Johnson, 1915, p. 62; 1934, p. 39.

*Type Locality.* None given.

*Range.* Halifax, N. S., to Cape Cod, Mass., 14 to 49 fms.

**Thyasira insignis** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 785.

*References.* Johnson, 1915, p. 62; 1934, p. 39.

*Type Locality.* None given.

*Range.* Grand Bank of Newfoundland to Cape Cod, Mass., 65 to 471 fms.

**Thyasira plana** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 788.

*References.* Whiteaves, 1901a, p. 137; Johnson, 1915, p. 63; 1934, p. 39.

*Type Locality.* None given.

*Range.* Halifax, N. S., to Cape Cod, Mass., 8 to 100 fms.

**Thyasira rotunda** Jeffreys 1881, Proc. Zoöl. Soc. London, 1881, p. 702.

*Reference.* Johnson, 1934, p. 39.

*Type Locality.* None given.

*Range.* Off Greenland, 2 to 1,012 fms.

**Thyasira sarsii** Philippi 1845, *vide* Johnson, 1934, see Remarks.

*Reference.* Johnson, 1934, p. 39.

*Type Locality.* Not located.

*Range.* Greenland. Off Cape Cod, Mass. (Verrill).

*Remarks.* This species is probably described in Zeitschr. für Malak., vol. 2, p. 74, where the description of *T. gouldii* appears. I have been unable to verify the reference as the periodical is not accessible to me at present.

**Thyasira trisinuata trisinuata** d'Orbigny 1846, Moll. Cuba, vol. 2, p. 300.

*References.* Verrill, 1873, p. 687; Whiteaves, 1901a, p. 137 (*Cryptodon obesus*); Johnson, 1915, p. 63; Oldroyd, 1924, p. 121; Johnson, 1934, p. 39.

*Type Locality.* Martinique and Guadeloupe.

*Range.* Sitka, Alaska, to San Diego, California. Labrador to West Indies, 15 to 192 fms.

**Thyasira trisinuata polygona** Jeffreys 1863, British Conchol., vol. 2, p. 248.

*Reference.* Oldroyd, 1924, p. 121.

*Type Locality.* Not located.

*Range.* Korea and the Gulf of Alaska to San Diego, California. Also Atlantic.

*Remarks.* Johnson (1934) does not recognize the variety.

Section *Axinulus* Verrill and Bush 1898

**Thyasira cycladia** S. V. Wood 1853, Monogr. Crag Moll., vol. 2, p. 122.

*References.* Posselt, 1898, p. 76; Johnson, 1934, p. 39.

*Type Locality.* Coralline Crag, Sutton, England.

*Range.* Baffin Bay, 1,750 fms.

**Thyasira eumyaria** M. Sars 1870, Christiania-Fjordens Fauna, vol. 2, p. 87.

*References.* Posselt, 1898, p. 77; Johnson, 1934, p. 39.

*Type Locality.* Christiania-Fjord?

*Range.* Baffin Bay, 100 fms. West Greenland; Lofotens; Ireland; Bay of Biscay.

**Thyasira ferruginosa** Forbes 1844, Rept. Brit. Assoc. Adv. Sci., 1843, p. 192.

*References.* Verrill and Bush, 1898, p. 793; Whiteaves, 1901a, p. 138; Johnson, 1915, p. 65; Oldroyd, 1924, p. 122; Johnson, 1934, p. 39.

*Type Locality.* Morea?

*Range.* Aleutian Islands. Arctic. Greenland to North Carolina, 20 to 1,525 fms.

**Thyasira succisa** Jeffreys 1876, Ann. Mag. Nat. Hist., (4) vol. 18, p. 492.

*References.* Johnson, 1915, p. 65; 1934, p. 39.

*Type Locality.* None given.

*Range.* North Atlantic, 92 to 1,366 fms. Off Fernandina, Florida, 294 fms.

**Thyasira (?) pygmaea** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 792.

*Reference.* Johnson, 1934, p. 40.

*Type Locality.* None given.

*Range.* Halifax, Nova Scotia, to Martha's Vineyard, Massachusetts. 206 to 499 fms.

Family UNGULINIDAE

Genus *Taras* Risso 1826

**Taras aleuticus** Dall 1901, Proc. U. S. Nat. Mus., vol. 23, p. 820.

*Reference.* Oldroyd, 1924, p. 124.

*Type Locality.* Kyska Harbour, Aleutian Islands, Alaska, 8 fms.

*Range.* Cape Lisburne, Arctic Ocean, to Aleutian Islands and Sitka Bay, Alaska.

**Taras orbellus** Gould 1852, Proc. Boston Soc. Nat. Hist., vol. 4, p. 90.

*References.* Oldroyd, 1924, p. 124; Grant and Gale, 1931, p. 293.

*Type Locality.* San Diego, California.

*Range.* Pribiloff Islands to the Gulf of California; Miocene, Pliocene, and Pleistocene of California.

**Taras torelli** Jeffreys 1876, Ann. Mag. Nat. Hist., vol. 18, p. 493.

*Reference.* Johnson, 1934, p. 40.

*Type Locality.* None given.

*Range.* Southeast of Greenland, 1,450 fms. Also Spitsbergen.

#### Family LUCINIDAE

Genus *Lucina* Bruguière 1797

Subgenus *Myrtaea* Turton 1822

**Lucina acutilineata acutilineata** Conrad 1849, U. S. Expl. Exped. (Wilkes), vol. 10, Geol., p. 725.

*References.* Oldroyd, 1924, p. 126; Grant and Gale, 1931, p. 286.

*Type Locality.* California.

*Range.* Port Althorp, Alaska, to the Coronado Islands. Upper Miocene, Pliocene, and Pleistocene of the West Coast.

*Synonym.* *Phacoides annulatus* Reeve (*vide* Grant and Gale).

**Lucina acutilineata densilirata** Dall 1919, Proc. Biol. Soc. Wash., vol. 32, p. 249.

*References.* Oldroyd, Ida S., 1924, p. 126; Grant and Gale, 1931, p. 287.

*Type Locality.* Sitka Harbour, Alaska, Station 92.

*Range.* Sitka, Alaska, to Esteros Bay, California.

*Remarks.* A synonym of *L. acutilineata* Conrad, *vide* Grant and Gale.

#### Section *Parvilucina* Dall 1901

**Lucina tenuisculpta** Carpenter 1864, Suppl. Rept. Brit. Assoc. Adv. Sci. for 1863, p. 642.

*References.* Oldroyd, 1924, p. 128; Grant and Gale, 1931, p. 288.

*Type Locality.* Vancouver Island.

*Range.* Nunivak Island, Bering Sea, to San Martin Island, Lower California. Miocene, Pliocene, and Pleistocene of California.

#### Family LEPTONIDAE

Genus *Chironia* Deshayes 1839

**Chironia suborbicularis suborbicularis** Montagu 1804, Test. Brit., p. 39.

*References.* Whiteaves, 1901a, p. 138; Oldroyd, 1924, p. 131; Grant and Gale, 1931, p. 299.



*Type Locality.* Plymouth, England.

*Range.* Bering Island, the Aleutians, and south to Panama. Also Atlantic. Pleistocene of California.

*Remarks.* On the Atlantic Coast the species is represented by the variety *gouldii* Thomson, which does not range farther north than Salem, Massachusetts. Whiteaves (1901a) notes that Jones's and Willis's record for Sable Island has not been confirmed. Grant and Gale assign all the Pacific Coast records to *C. suborbicularis laperousei* Deshayes.

**Chironia suborbicularis laperousei** Deshayes 1839, Rev. Zoöl. Soc. Cuvierienne, vol. 2, p. 357.

*References.* Oldroyd, 1924, p. 131; Grant and Gale, 1931, p. 300.

*Type Locality.* None given, according to Oldroyd.

*Range.* Bering Sea and Pribiloff Islands to San Diego, California. Pleistocene of California.

#### Genus *Entovalva* Voeltzkow 1890

##### Section *Kelliola* Dall 1899

**Entovalva symmetros** Jeffreys 1876, Ann. Mag. Nat. Hist., 1876, p. 491.

*Reference.* Johnson, 1934, p. 44.

*Type Locality.* "Valorous" Expedition, Station 9, 1,750 fms.

*Range.* Baffin Bay and North Atlantic, 388 to 1,750 fms.

#### Genus *Kellia* Turton 1822

**Kellia rubra** Montagu 1804, Test. Brit., p. 83.

*References.* Oldroyd, 1924, p. 138; Grant and Gale, 1931, p. 302.

*Type Locality.* British Coast.

*Range.* Vancouver Island, British Columbia, to Callao, Peru. On the Atlantic Coast, from Lake Worth Inlet, Florida, to the Tortugas and Bermuda. Pleistocene of Lower California.

#### Genus *Montacuta* Turton 1822

**Montacuta dawsoni** Jeffreys 1863, Brit. Conch., vol. 2, p. 216.

*References.* Posselt, 1898, p. 73; Johnson, 1934, p. 44.

*Type Locality.* ?

*Range.* Disco, Greenland, to St. John's, Newfoundland.

#### Genus *Pseudopythina* Fischer 1884

**Pseudopythina compressa** Dall 1899, Proc. U. S. Nat. Mus., vol. 21, p. 888.

*Reference.* Oldroyd, 1924, p. 136.

*Type Locality.* Bering Sea, south of Nunivak Island, 4 to 28 fms.

*Range.* Cape Lisburne, Arctic Ocean, to Acapulco, Mexico. Commensal with crustaceans.

**Pseudopythina myaciformis** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 412.

*Reference.* Oldroyd, 1924, p. 136.

*Type Locality.* Port Orchard, Puget Sound.

*Range.* Puget Sound; commensal with crustaceans.

**Pseudopythina rugifera** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 643.

*Reference.* Oldroyd, 1924, p. 136.

*Type Locality.* Puget Sound.

*Range.* Known only from the type locality; commensal with *Gebia*.

Genus *Rochefortia* Vélain 1876

**Rochefortia aleutica** Dall 1899, Proc. U. S. Nat. Mus., vol. 21, p. 892.

*Reference.* Oldroyd, 1924, p. 133.

*Type Locality.* Bering Sea?

*Range.* Bering Sea to Coronado Islands, Lower California.

**Rochefortia beringensis** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 411.

*Reference.* Oldroyd, 1924, p. 133.

*Type Locality.* Bering Island, Bering Sea.

*Range.* Known only from the type locality.

**Rochefortia compressa** Dall 1913, Proc. U. S. Nat. Mus., vol. 45, p. 596.

*Reference.* Oldroyd, 1924, p. 134.

*Type Locality.* Gulf of California.

*Range.* Shumagin Islands, Alaska, to the Gulf of California.

**Rochefortia grebnitzskii** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 411.

*Reference.* Oldroyd, 1924, p. 133.

*Type Locality.* Bering Island, Bering Sea.

*Range.* Known only from the type locality.

**Rochefortia mölleri** "Holböll" Mörch 1875, Arctic Manual, p. 131.

*References.* Posselt, 1898, p. 74; Whiteaves, 1901a, p. 138; Johnson, 1934, p. 44.

*Type Locality.* Greenland?

*Range.* Greenland (Johnson); Halifax Harbor (Whiteaves).

*Remarks.* Johnson (1934) either overlooked or doubted the record by Miss Bush quoted by Whiteaves (1901).

**Rochefortia planata** Dall 1885, Arch. für Naturg., vol. 51, p. 34.

*References.* Oldroyd, 1924, p. 132.

*Type Locality.* Arctic Ocean.

*Range.* Icy Cape, Arctic Ocean. to Shumagin Islands, Alaska.

**Rochefortia planulata** Stimpson 1851, Shells of New England, p. 17.

*References.* Verrill, 1873, p. 688; Johnson, 1915, p. 66; 1934, p. 44.

*Type Locality.* New Bedford Harbor, Mass.

*Range.* Nova Scotia to Texas, 0 to 48 fms.

**Rochefortia tumida** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 129.

*References.* Oldroyd, 1924, p. 132; Grant and Gale, 1931, p. 301.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Shumagin Islands, Alaska, to San Diego, California. Pleistocene of Lower California.

#### Genus *Serridens* Dall 1899

**Serridens oblonga** Carpenter 1865, Proc. Calif. Acad. Nat. Sci., 1865, p. 210.

*References.* Kelsey, 1902, p. 144; Oldroyd, 1924, p. 135.

*Type Locality.* San Diego, California.

*Range.* Puget Sound to Coronado Islands, Lower California.

#### Genus *Turtonia* Alder 1848

**Turtonia minuta** Fabricius 1780, Fauna Grönl., p. 412.

*References.* Verrill, 1873, p. 687; Whiteaves, 1901a, p. 239; Johnson, 1915, p. 67; Oldroyd, 1924, p. 138; Johnson, 1934, p. 45.

*Type Locality.* Greenland.

*Range.* Bering Strait to Magdalena Bay, Lower California. Greenland to Massachusetts.

**Turtonia occidentalis** Dall 1871, Amer. Jour. Conch., vol. 7, p. 150.

*Reference.* Oldroyd, 1924, p. 139.

*Type Locality.* Plover Bay, Eastern Siberia.

*Range.* Known only from the type locality.

#### Family CARDIIDAE

##### Genus *Cardium* Linné 1758

##### Subgenus *Nemocardium* Meek 1876

**Cardium centiflosum richardsonii** Whiteaves 1878, Canad. Naturalist (2) vol. 8, p. 469.

*References.* Oldroyd, 1924, p. 146; Grant and Gale, 1931, p. 311.

*Type Locality.* Straits of Georgia, between Race Island and lighthouse and Victoria Harbour, British Columbia.

*Range.* Queen Charlotte Islands, British Columbia, to San Francisco, California.

Genus *Clinocardium* Keen 1936

***Clinocardium californiense californiense*** Deshayes 1841, in Guérin, Mag. de Zoöl., Moll., pl. 47.

*References.* Oldroyd, 1924, p. 143; Grant and Gale, 1931, p. 309; Keen, 1936, pp. 119-120.

*Type Locality.* Puget Sound.

*Range.* Arctic Ocean to San Diego, California. Japan. Miocene of Oregon; Pliocene of Alaska and California; Pliocene or Pleistocene of Oregon.

***Clinocardium californiense comoxense*** Dall 1900, Trans. Wagner Inst. Sci., vol. 3, p. 1093.

*Reference.* Grant and Gale, 1931, p. 309.

*Type Locality.* Vancouver Island, British Columbia, boulder clay of Pleistocene age.

*Range.* Known only from the type locality.

***Clinocardium ciliatum*** O. Fabricius 1780, Fauna Grönl., p. 410.

*References.* Whiteaves, 1901a, p. 128; Johnson, 1915, p. 68; Oldroyd, 1924, p. 142; Grant and Gale, 1931, p. 310; Johnson, 1934, p. 45; Keen, 1936, p. 120.

*Type Locality.* Greenland.

*Range.* Arctic Ocean to Puget Sound and Japan. Circumboreal. Greenland to Cape Cod, Massachusetts. Pleistocene of British Columbia, Hudson Bay, Quebec, New Brunswick, and Maine.

***Clinocardium fucanum*** Dall 1907, Nautilus, vol. 20, p. 112.

*References.* Oldroyd, 1924, p. 143; Grant and Gale, 1931, p. 309; Keen, 1936, p. 120.

*Type Locality.* Straits of Juan de Fuca.

*Range.* Southern Bering Sea and south to Monterey, California.

*Remarks.* A synonym of *C. californiense*, according to Grant and Gale, but accepted by Keen (1936).

***Clinocardium nuttallii*** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 229.

*References.* Oldroyd, 1924, p. 142; Grant and Gale, 1931, p. 307; Keen, 1936, p. 120.

*Type Locality.* A few miles from the estuary of the Columbia River.

*Range.* Nunivak, Pribiloff, and Commander Islands to Japan and San Diego, California. Also Pleistocene of California.

*Synonym.* *Cardium corbis* auct. non Martyn.

Genus *Cerastoderma* Poli 1795

***Cerastoderma elegantulum*** Beck in Möller 1842, Index Moll. Grönl., p. 20.

*References.* Posselt, 1898, p. 56; Johnson, 1934, p. 45.

*Type Locality.* ?

*Range.* Greenland, 90 fms.; Iceland; Norway.

**Cerastoderma pinnulatum** Conrad 1831, Jour. Acad. Nat. Sci. Phila., vol. 6, p. 260.

*References.* Verrill, 1873, p. 683; Whiteaves, 1901a, p. 129; Johnson, 1915, p. 68; 1934, p. 45.

*Type Locality.* Massachusetts.

*Range.* Labrador to Cape Lookout, North Carolina. Pleistocene of New Brunswick.

*Remarks.* Whiteaves (1901a) quotes Bush, who doubts the record for the Straits of Belle Isle, and Packard, who states that it did not occur north of that Strait.

#### Genus *Laevicardium* Swainson 1840

**Laevicardium mortoni** Conrad 1831, Jour. Acad. Nat. Sci. Phila., vol. 6, p. 259.

*References.* Verrill, 1873, p. 683; Whiteaves, 1901a, p. 129; Johnson, 1915, p. 68; 1934, p. 46; Clench and Smith, 1944, Johnsonia, No. 13, p. 27.

*Type Locality.* "Inhabits the northern coast".

*Range.* Nova Scotia to the Gulf of Mexico.

*Remarks.* Clench and Smith (1944) give the range as Massachusetts to Guatemala.

#### Genus *Serripes* Beck 1841

**Serripes groenlandicus groenlandicus** Bruguière 1789, Encycl. Méthod., Vers, vol. 1, pt. 1, p. 222.

*References.* Hancock, 1846, p. 336; Whiteaves, 1901a, p. 129; Johnson, 1915, p. 69; Oldroyd, 1924, p. 145; Grant and Gale, 1931, p. 314; Eyerdam, 1933, pp. 124-128; Johnson, 1934, p. 46; Clench and Smith, 1944, p. 28.

*Type Locality.* Coast of Greenland.

*Range.* Greenland to Cape Cod, Massachusetts, 2 to 60 fms.; Arctic to Puget Sound. Japan. Pleistocene of Greenland, Labrador, Quebec, New Brunswick, and Maine; Miocene? of Alaska; Pliocene of Alaska; Pleistocene of Arctic Canada and Alaska.

*Remarks.* Posselt (1898, p. 55) and Wood (Crag Moll., p. 160) give this species as of Chemnitz 1782 (Conch. Cab., vol. 6, p. 202, 1782), but Grant and Gale point out that Bruguière was the first to use the name in a strictly binomial manner.

**Serripes groenlandicus protractus** Dall 1900, Trans. Wagner Free Inst. Sci., vol. 3, pt. 5, p. 1112.

*References.* Johnson, 1934, p. 46; Clench and Smith, 1944, p. 28.

*Type Locality.* Greenland.

*Range.* Labrador to Gulf of St. Lawrence.

*Remarks.* A synonym of *S. groenlandicus* according to Clench and Smith (1944).

**Serripes laperousii** Deshayes 1839, Rev. Zoöl. Soc. Cuv., p. 360.

*References.* Oldroyd, 1924, p. 145; Grant and Gale, 1931, p. 314.

*Type Locality.* "Mers de Californie."

*Range.* Bering Strait to Sitka, Alaska. Japan. Pleistocene of Alaska.

## Family VENERIDAE

Genus *Gemma* Deshayes 1853

***Gemma gemma*** Totten 1834, Amer. Jour. Sci., vol. 26, p. 367.

*References.* Verrill, 1873, p. 682; Whiteaves, 1901a, p. 136; Johnson, 1915, p. 70; Oldroyd, 1924, p. 160; Johnson, 1934, p. 49.

*Type Locality.* New England.

*Range.* Labrador to North Carolina. Puget Sound to San Francisco; introduced.

*Remarks.* Only the typical variety is recorded for Canadian waters. The variety *manhattensis* Prime 1862 (Johnson, 1934, p. 49) should be looked for in Bay of Fundy waters; the northernmost record at present is Massachusetts.

Genus *Liocyma* Dall 1870

***Liocyma?* arctica** Reeve 1864, Conchologia Iconica, XIV, Monogr. of Cytherea, p. ?

*Reference.* Dall, 1902b, p. 378.

*Type Locality.* Arctic Seas.

*Range.* Known only from the type locality.

***Liocyma beckii*** Dall 1870, Proc. Boston Soc. Nat. Hist., vol. 13, p. 257.

*Reference.* Oldroyd, 1924, p. 158.

*Type Locality.* Plover Bay, East Siberia.

*Range.* Arctic Ocean, Bering Sea, Japan.

***Liocyma fluctuosa fluctuosa*** Gould 1841, Rept. Inv. Mass., p. 87.

*References.* Whiteaves, 1901a, p. 136; Johnson, 1915, p. 70; Grant and Gale, 1931, p. 336; Johnson, 1934, p. 49.

*Type Locality.* "Bank Fisheries".

*Range.* Greenland to Nova Scotia; Arctic Ocean; Miocene of Alaska.

***Liocyma fluctuosa brunnea*** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 378.

*Reference.* Johnson, 1934, p. 49.

*Type Locality.* Gulf of St. Lawrence.

*Range.* Known only from the type locality.

***Liocyma scammoni*** Dall 1871, Amer. Jour. Conch., vol. 7, p. 145.

*Reference.* Oldroyd, 1924, p. 159.

*Type Locality.* Port Simpson, British Columbia.

*Range.* Known only from the type locality.

***Liocyma viridis*** Dall 1871, Amer. Jour. Conch., vol. 7, p. 146.

*Reference.* Oldroyd, 1924, p. 159.

*Type Locality.* Arctic Ocean.

*Range.* Arctic Sea southward to Japan and east to Kodiak Island, Alaska.



Genus *Clementia* Gray 1842Subgenus *Compsomyax* Stewart 1930

***Clementia subdiaphana*** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 640.

*References.* Oldroyd, 1924, p. 155; Grant and Gale, 1931, p. 334.

*Type Locality.* Puget Sound.

*Range.* Sannakh Islands, Alaska, to Santa Barbara Islands and San Pedro, California. Pliocene of Oregon and California; Pleistocene of California.

Genus *Venerupis* Lamarck 1818Subgenus *Humilaria* Grant and Gale 1931

***Venerupis perlaminosa kennerlyi*** (Carpenter) Reeve 1863, Conch. Iconica, vol. 14, Venus, spec. 41.

*References.* Oldroyd, 1924, p. 155; Grant and Gale, 1931, p. 327.

*Type Locality.* Puget Sound.

*Range.* Kodiak Island, Alaska, to Santa Barbara Islands, California.

Subgenus *Callithaca* Dall 1902

***Venerupis restorationis*** Frizzell 1930, Nautilus, vol. 43, pp. 120-121.

*Reference.* Grant and Gale, 1931, p. 328.

*Type Locality.* Not given, but probably Restoration Point, Washington.

*Range.* Late Pleistocene beds at Restoration Point, near Port Blakely, Washington; extremely rare living, Puget Sound.

*Remarks.* A variety of *V. tenerrima* Cpr. according to Grant and Gale (1931).

***Venerupis tenerrima*** Carpenter 1865, Proc. Zoöl. Soc. London, 1865, p. 200.

*References.* Oldroyd, 1924, p. 156; Grant and Gale, 1931, p. 327.

*Type Locality.* Panama.

*Range.* Puget Sound to San Quentin Bay, Lower California. Panama? Pliocene and Pleistocene of California.

Subgenus *Protothaca* Dall 1902

***Venerupis staminea staminea*** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 250.

*References.* Oldroyd, 1924, p. 156; Grant and Gale, 1931, p. 329.

*Type Locality.* California.

*Range.* Commander and Aleutian Islands to Puget Sound and Socorro Island. Kamchatka. Japan. Miocene of Alaska, Washington, Oregon, and California. Pliocene and Pleistocene of California.



**Venerupis staminea laciniata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 641.

*References.* Oldroyd, 1924, p. 157; Grant and Gale, 1931, p. 321.

*Type Locality.* Monterey or San Diego, California.

*Range.* Unalaska, Alaska, to San Diego, California. Pleistocene of California.

**Venerupis staminea orbella** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 641.

*References.* Oldroyd, 1924, p. 157; Grant and Gale, 1931, p. 329.

*Type Locality.* None given.

*Range.* Kodiak Island, Alaska, to San Diego, California.

*Remarks.* A synonym of *V. staminea* according to Grant and Gale (1931).

**Venerupis staminea petitii** Deshayes 1839, Revue Zoöl. Soc. Cuv., 1839, p. 359.

*References.* Oldroyd, 1924, p. 157; Grant and Gale, 1931, p. 329.

*Type Locality.* Columbia River.

*Range.* Aleutian Islands to San Quentin Bay, Lower California.

*Remarks.* A synonym of *V. staminea* according to Grant and Gale.

**Venerupis staminea ruderata** Deshayes 1853, Cat. Conch. Brit. Mus., vol. 1, p. 136.

*References.* Oldroyd, 1924, p. 157; Grant and Gale, 1931, p. 331.

*Type Locality.* California.

*Range.* Southern Bering Sea to Lobitos, California. Pleistocene of California.

**Venerupis staminea spatiosa** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 413.

*References.* Oldroyd, 1924, p. 158; Grant and Gale, 1931, p. 330.

*Type Locality.* Coos Bay, Oregon.

*Range.* Puget Sound to Anaheim Bay, California.

*Remarks.* A synonym of *V. staminea*, according to Grant and Gale (1931).

#### Genus *Paphia* Bolten 1798

**Paphia philippinarum** Adams and Reeve 1850, Zoology, Voy. H.M.S. *Samarang*, p. 79.

*References.* Quayle, 1938, pp. 53-54; *ibid.*, 1939, pp. 139-140.

*Type Locality.* Philippines.

*Range.* Western Pacific; introduced, Ladysmith Harbour, British Columbia.

*Synonym.* *Paphia bifurcata* Quayle.

#### Genus *Pitar* Römer 1857

**Pitar ida** Tegland 1928, Nautilus, vol. 42, pp. 4-6.

*Type Locality.* Sitka, Alaska?

*Range.* Sitka, Alaska? Known only from the type locality.

*Remarks.* There is some doubt as to the locality of the types.

**Pitar morrhuana** 'Linsley' Gould 1848, Amer. Jour. Sci., (1) vol. 48, p. 276.

*References.* Verrill, 1873, p. 681; Johnson, 1915, p. 69; 1934, p. 47.

*Type Locality.* Stonington, Connecticut, in a codfish stomach.

*Range.* Prince Edward Island to Cape Hatteras, North Carolina.

#### Genus *Psephidia* Dall 1902

**Psephidia lordi** Baird 1863, Proc. Zoöl. Soc. London, 1863, p. 69.

*References.* Oldroyd, 1924, p. 161; Grant and Gale, 1931, p. 336.

*Type Locality.* Esquimalt Harbour, Vancouver Island, British Columbia.

*Range.* Unalaska, Alaska, to Coronado Islands, just off San Diego, California. Pliocene and Pleistocene of California.

**Psephidia ovalis** Dall 1902, Proc. U. S. Nat. Mus., vol. 26, p. 407.

*References.* Oldroyd, 1924, p. 161; Grant and Gale, 1931, p. 337.

*Type Locality.* North side of Catalina Island, California, 16 fms.

*Range.* St. Paul Island, Bering Sea, to San Diego, California.

*Remarks.* A variety of *P. lordi* according to Grant and Gale (1931).

#### Genus *Saxidomus* Conrad 1837

**Saxidomus giganteus giganteus** Deshayes 1839, Revue Zoöl. Soc. Cuv., vol. 2, p. 359.

*References.* Oldroyd, 1924, p. 153; Grant and Gale, 1931, p. 342.

*Type Locality.* Not known to Oldroyd.

*Range.* Aleutian Islands, from Attu Island eastward and south to Monterey, California. Pliocene of Oregon and California; Pleistocene of Puget Sound and Straits of Georgia.

*Remarks.* A variety of *S. nuttallii* Conrad according to Grant and Gale (1931).

**Saxidomus giganteus brevis** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 413.

*References.* Oldroyd, 1924, p. 153; Grant and Gale, 1931, p. 342.

*Type Locality.* Mole Harbour, Admiralty Islands, Alaska.

*Range.* Admiralty Islands, Alaska, to Tacoma, Washington.

*Remarks.* A variety of *S. nuttallii* Conrad according to Grant and Gale (1931).

#### Genus *Transennella* Dall 1883

**Transennella tantilla** Gould 1852, Boston Jour. Nat. Hist., vol. 6, p. 406.

*References.* Oldroyd, 1924, p. 150; Grant and Gale, 1931, p. 338.

*Type Locality.* Santa Barbara, California.

*Range.* Sitka Harbour, Alaska, to Lower California. Pleistocene of California.

Genus *Venus* Linné 1758

***Venus kennicottii*** Dall 1871, Amer. Jour. Conch., vol. 7, p. 147.

*References.* Oldroyd, 1924, p. 155; Grant and Gale, 1931, p. 324.

*Type Locality.* Neah Bay, Washington.

*Range.* Neah Bay, Washington, to Mendocino County, California.

***Venus mercenaria mercenaria*** Linné 1758, Syst. Nat., ed. 10, vol. 1, p. 686.

*References.* Verrill, 1873, p. 681; Whiteaves, 1901a, p. 135; Kellogg, 1903, 27 pp.; Johnson, 1915, p. 70; Procter, 1929, pp. 102-103; Johnson, 1934, p. 49.

*Type Locality.* "Pennsylvania."

*Range.* Gulf of St. Lawrence to Florida and Gulf of Mexico.

***Venus mercenaria alba*** Dall 1902, Trans. Wagner Free Inst. Sci., vol. 3, pt. 6, p. 1314.

*Reference.* Johnson, 1934, p. 49.

*Type Locality.* None given.

*Range.* Locally associated with the typical form.

***Venus mercenaria subradiata*** Palmer 1927, Palaeontogr. Amer., vol. 1, p. 395.

*Reference.* Johnson, 1934, p. 49.

*Type Locality.* None given.

*Range.* Locally associated with the typical form.

Genus *Vesicomya* Dall 1886

***Vesicomya ovalis*** Dall 1895, Proc. U. S. Nat. Mus., vol. 18, p. 18.

*Reference.* Oldroyd, 1924, p. 148.

*Type Locality.* USFC Station 3360, Gulf of Panama, 1,672 fms.

*Range.* Clarence Strait, Alaska, 322 fms., to Panama Bay, 1,672 fms.

***Vesicomya stearnsii*** Dall 1895, Proc. U. S. Nat. Mus., vol. 17, p. 693.

*Reference.* Oldroyd, 1924, p. 148.

*Type Locality.* Off Coast of Washington, near Tillamook, Oregon.

*Range.* Washington to the Gulf of California.

## Family PETRICOLIDAE

Genus *Petricola* Lamarck 1801

***Petricola carditoides*** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 255.

*References.* Oldroyd, 1924, p. 163; Grant and Gale, 1931, p. 355.

*Type Locality.* Near Santa Barbara, California.

*Range.* Vancouver Island to Lower California. Pliocene and Pleistocene of California.

Subgenus *Petricolaria* Stoliczka 1870

**Petricola pholadiformis** Lamarck 1818, Anim. sans Vert., ed. 1, vol. 5, p. 505.

*References.* Verrill, 1873, p. 678; Whiteaves, 1901a, p. 137; Johnson, 1915, p. 71; Grant and Gale, 1931, p. 356; Johnson, 1934, p. 50.

*Type Locality.* None given.

*Range.* Prince Edward Island to the West Indies and Texas.

## Family COOPERELLIDAE

Genus *Cooperella* Carpenter 1864

**Cooperella subdiaphana** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 639.

*References.* Carpenter, 1865, p. 134; Oldroyd, 1924, p. 163.

*Type Locality.* San Diego, California.

*Range.* Queen Charlotte Islands, British Columbia, to the Gulf of California.

## Family TELLINIDAE

Genus *Macoma* Leach 1819

**Macoma alaskana** Dall 1900, Proc. U. S. Nat. Mus., vol. 23, p. 323.

*Reference.* Oldroyd, 1924, p. 177.

*Type Locality.* Lituya Bay, Alaska.

*Range.* Lituya Bay to Sitka, Alaska.

**Macoma balthica** Linné 1758, Syst. Nat., Ed. 10, p. 677.

*References.* Verrill, 1873, p. 676; Whiteaves, 1901a, p. 141; Johnson, 1915, p. 73; Oldroyd, 1924, p. 172; Johnson, 1934, p. 52; Grant and Gale, 1931, p. 371.

*Type Locality.* Baltic Sea.

*Range.* Point Barrow, Arctic Ocean, to San Diego, California. Japan. Circumboreal. Arctic Ocean south in deep water to Georgia. Miocene of Alaska and British Columbia; Pliocene of California; Pleistocene of Alaska, Northwest Territories of Canada, Quebec, and California.

**Macoma brota brota** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 413.

*References.* Oldroyd, 1924, p. 170; Grant and Gale, 1931, p. 368.

*Type Locality.* Bering Strait.

*Range.* Arctic Ocean, Bering Sea to Puget Sound. Pleistocene, Northwest Territories of Canada.

**Macoma brota lipara** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 414.

*References.* Oldroyd, 1924, p. 171; Grant and Gale, 1931, p. 368.

*Type Locality.* Bering Strait.

*Range.* Bering Strait south to Puget Sound.

**Macoma calcarea** Gmelin 1792, Syst. Nat., vol. 6, p. 3236.

*References.* Hancock, 1846, p. 335; Whiteaves, 1901a, p. 142; Johnson, 1915, p. 73; Oldroyd, 1924, p. 173; Johnson, 1934, p. 52; Grant and Gale, 1931, p. 369.

*Type Locality.* Iceland or Greenland.

*Range.* Arctic Ocean to Monterey, California. Japan. Circumboreal. Greenland to Long Island Sound, 5 to 40 fms. Oligocene of Washington; Miocene of Oregon and Alaska; Pliocene of Alaska and California, Northwest Territories of Canada, and Oregon. Pleistocene of Scandinavia, Scotland, Siberia, Alaska, Oregon, California, Greenland, Eastern Canada, and New England.

**Macoma carlottensis** Whiteaves 1880, Rept. Progress Geol. Surv. Canada, 1879-80, p. 196B.

*References.* Oldroyd, 1924, p. 175; Grant and Gale, 1931, p. 372.

*Type Locality.* Virago Sound, Queen Charlotte Islands, British Columbia.

*Range.* Arctic Ocean to Puget Sound.

*Synonym.* *M. inflatula* Dall, according to Grant and Gale (1931, p. 372).

**Macoma expansa** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 56.

*Reference.* Oldroyd, 1924, p. 176.

*Type Locality.* Puget Sound.

*Range.* Puget Sound to La Jolla, California.

**Macoma incongrua** Martens 1865, Ann. Mag. Nat. Hist., vol. 16, p. 430.

*References.* Oldroyd, 1924, p. 170; Grant and Gale, 1931, p. 373.

*Type Locality.* Yokohama, Japan.

*Range.* Arctic Ocean to San Diego, California. Japan. Pliocene of Alaska.

**Macoma inflata** "Stimpson" Dawson 1872, Canadian Naturalist vol. 6, p. 377.

*References.* Posselt, 1898, p. 84; Verrill and Bush, 1898, p. 778; Whiteaves, 1901a, p. 143; Johnson, 1934, p. 52.

*Type Locality.* None given.

*Range.* Greenland; Gulf of St. Lawrence south to N. 40°, 57 to 206 fms. Pleistocene of Quebec.

**Macoma inflatula** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 11.

*References.* Oldroyd, 1924, p. 174; Grant and Gale, 1931, p. 372.

*Type Locality.* Comox, Vancouver Island, British Columbia.

*Range.* Arctic Ocean to Ballenas Lagoon, Lower California.

*Remarks.* A synonym of *M. carlottensis* Whiteaves according to Grant and Gale (1931).

**Macoma inquinata inquinata** Deshayes 1854, Proc. Zool. Soc. p. 357.

*References.* Oldroyd, 1924, p. 172; Grant and Gale, 1931, p. 367.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Bering Strait to Monterey, California. Japan. Pliocene and Pleistocene of California; Pleistocene of Oregon.

**Macoma inquinata arnheimi** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 414.

*References.* Oldroyd, 1924, p. 172; Grant and Gale, 1931, p. 367.

*Type Locality.* Kodiak Island, Alaska.

*Range.* Kodiak Island, Alaska, to San Francisco, California. Miocene? of Washington; Pleistocene of California.

**Macoma kelseyi** Dall 1900, Trans. Wagner Free Inst., vol. 3, p. 1052.

*References.* Oldroyd, 1924, p. 171; Grant and Gale, 1931, p. 366.

*Type Locality.* Pleistocene of San Diego, California.

*Range.* Living in Puget Sound. Pleistocene of California.

*Remarks.* A variety of *M. nasuta* (Conrad) according to Grant and Gale (1931).

**Macoma krausei** Dall 1900, Proc. U. S. Nat. Mus., vol. 23, p. 322.

*Reference.* Johnson, 1934, p. 52.

*Type Locality.* Off Icy Cape, Arctic Ocean, 7 to 15 fms.

*Range.* Circumpolar; Greenland.

**Macoma liotricha** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 12.

*Reference.* Oldroyd, 1924, p. 176.

*Type Locality.* British Columbia.

*Range.* Aleutian Islands and Shumagin Islands, Alaska, to British Columbia.

**Macoma middendorffii** Dall 1884, Proc. U. S. Nat. Mus., vol. 7, p. 347.

*References.* Oldroyd, 1924, p. 170; Grant and Gale, 1931, p. 372.

*Type Locality.* Bering Sea.

*Range.* Bering Strait to Aleutian Islands and Chirikoff Island, Alaska. Miocene of Alaska; Pliocene of Alaska.

**Macoma moesta** Deshayes 1854, Proc. Zool. Soc., p. 361.

*References.* Oldroyd, 1924, p. 173; Grant and Gale, 1931, p. 370.

*Type Locality.* "Northern Ocean".

*Range.* Arctic Ocean, Bering Sea, Shumagin Islands. Also Atlantic. Pliocene? of California.

*Remarks.* This species is not mentioned by Johnson (1934), possibly because it is found north of the range covered by his list.



**Macoma nasuta** Conrad 1837, Jour. Acad. Nat. Sci. Phila., Vol. 7, p. 258.

*References.* Oldroyd, 1924, p. 174; Grant and Gale, 1931, p. 365.

*Type Locality.* Near San Diego, California.

*Range.* Kodiak Island and Cook Inlet, Alaska, to Scammon's Lagoon, Lower California. Oligocene of Oregon; Miocene of Alaska, British Columbia, Washington, Oregon, and California; Pliocene of California; Pleistocene of California.

**Macoma oneilli** Dall 1919, Can. Arct. Exped., Sci. Res., part 8A, p. 20.

*Reference.* Oldroyd, 1924, p. 173.

*Type Locality.* Dolphin and Union Strait, Arctic Ocean.

*Range.* Known only from the type locality.

**Macoma planiuscula** Grant and Gale 1931, San Diego Soc. Nat. Hist., Mem. 1, p. 372.

*Type Locality.* Nunivak Island, Alaska.

*Range.* Arctic Ocean to Puget Sound. Miocene? of Alaska and British Columbia.

**Macoma quadrana** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 414.

*Reference.* Oldroyd, 1924, p. 175.

*Type Locality.* Point Conception, Station 2892, 284 fms.

*Range.* Boca de Quadra, Alaska, to Coronado Islands, Lower California.

**Macoma sitkana** Dall 1900, Proc. U. S. Nat. Mus., vol. 23, p. 323.

*Reference.* Oldroyd, 1924, p. 171.

*Type Locality.* Sitka Harbour, Alaska.

*Range.* Kodiak Island to Lituya and Sitka, Alaska.

**Macoma tenta** Say 1834, Amer. Conchol., pl. 65, fig. 3.

*References.* Verrill, 1873, p. 678; Johnson, 1915, p. 73; 1934, p. 52.

*Type Locality.* South Carolina.

*Range.* Maine to Florida.

**Macoma truncaria** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 414.

*Reference.* Oldroyd, 1924, p. 177.

*Type Locality.* Arctic coast between Cape Halkett and Gary River.

*Range.* Known only from the type locality.

**Macoma yoldiformis** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 630.

*References.* Oldroyd, 1924, p. 177; Grant and Gale, 1931, p. 373.

*Type Locality.* "Boreal, Pacific."

*Range.* Puget Sound to San Diego, California. Pliocene and Pleistocene of California.



Section *Rexithaerus* Conrad 1869

**Macoma indentata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 639.

*References.* Oldroyd, 1924, p. 178; Grant and Gale, 1931, p. 374.

*Type Locality.* San Pedro, California.

*Range.* Puget Sound to Lower California. Miocene of Oregon and California; Pliocene and Pleistocene of California.

**Macoma secta** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 257.

*References.* Oldroyd, 1924, p. 178; Grant and Gale, 1931, p. 374.

*Type Locality.* San Diego, California.

*Range.* Vancouver Island to the Gulf of California. Japan. Miocene of Washington, Oregon, and California; Pliocene and Pleistocene of California.

Genus *Tellina* Linné 1758Subgenus *Angulus* Megerle von Mühlfeld 1811

**Tellina carpenteri** Dall 1900, Proc. U. S. Nat. Mus., vol. 23, p. 303.

*References.* Oldroyd, 1924, p. 166; Grant and Gale, 1931, p. 361.

*Type Locality.* Neah Bay, Washington.

*Range.* Forrester Island, Alaska, to the Gulf of California.

*Synonym.* *T. variegata* Carpenter 1864 (Brit. Assoc. Adv. Sci., Rept. for 1863, pp. 611, 627, 639) *non* Gmelin 1792, *fide* Grant and Gale (1931).

**Tellina modesta** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 639.

*References.* Oldroyd, 1924, p. 167; Grant and Gale, 1931, p. 361.

*Type Locality.* Puget Sound.

*Range.* Vancouver Island, British Columbia, to Lower California. Pleistocene of California.

**Tellina tenera** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 303.

*References.* Verrill, 1873, p. 677; Whiteaves, 1901a, p. 141; Johnson, 1915, p. 72; 1934, p. 51.

*Type Locality.* "Coast of New Jersey."

*Range.* Gaspé Bay to the Gulf of Mexico.

Subgenus *Moerella* Fischer 1887

**Tellina salmonea** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 639.

*References.* Oldroyd, 1924, p. 165; Grant and Gale, 1931, p. 359.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Aleutian Islands to San Pedro, California. Miocene and Pleistocene of California.

Subgenus *Oudardia* Monterosato 1884

**Tellina buttoni** Dall 1900, Proc. U. S. Nat. Mus., vol. 23, p. 304.

*References.* Oldroyd, 1924, p. 167; Grant and Gale, 1931, p. 361.

*Type Locality.* Guadalupe Island, off Lower California.

*Range.* Lituya Bay, Alaska, to the Gulf of California. Pleistocene of California.

Subgenus *Peronidia* Dall 1900

**Tellina bodegensis** Hinds 1844, Voy. *Sulphur*, Zoöl., vol. 2, p. 67.

*References.* Oldroyd, 1924, p. 168; Grant and Gale, 1931, p. 362.

*Type Locality.* "Russian Bodegas."

*Range.* Queen Charlotte Islands, British Columbia, to the Gulf of California. Miocene of Oregon; Pliocene and Pleistocene of California.

**Tellina lutea lutea** Gray 1828, Index Test., Suppl., pl. 1.

*References.* Oldroyd, 1924, p. 169; Grant and Gale, 1931, p. 363.

*Type Locality.* Icy Cape.

*Range.* Arctic Ocean, Bering Sea, Aleutian Islands, and East Cook Inlet, Alaska. Japan. Miocene of Alaska.

**Tellina lutea venulosa** Schrenck 1861, Bull. Imp. Acad. Sci. St. Petersb., vol. 4, p. 412.

*References.* Oldroyd, 1924, p. 169; Grant and Gale, 1931, p. 363.

*Type Locality.* Arctic Ocean.

*Range.* Shumagin Islands, Alaska, to Sakhalin, Japan.

*Remarks.* A synonym of *T. lutea* according to Grant and Gale (1931).

## Family SEMELIDAE

Genus *Abra* "Leach" Lamarck 1818

**Abra longicallis americana** Verrill and Bush 1898, Proc. U. S. Nat. Mus., vol. 20, p. 778.

*Reference.* Johnson, 1934, p. 53.

*Type Locality.* Not designated.

*Range.* Arctic Ocean to the West Indies, 50 to 1,467 fms.

Genus *Cumingia* Sowerby 1833

**Cumingia tellinoides** Conrad 1831, Jour. Acad. Nat. Sci., Phila., vol. 6, p. 258.

*References.* Verrill, 1873, p. 679; Whiteaves, 1901a, p. 141; Johnson, 1915, p. 74; 1934, p. 53.

*Type Locality.* "Northern Coast." (Northern Coast of the United States is meant.)

*Range.* Prince Edward Island. Massachusetts to Florida.

Genus *Semele* Schumacher 1817

***Semele rubropicta*** Dall 1871, Amer. Jour. Conch., vol. 7, p. 144.

*References.* Oldroyd, 1924, p. 180; Grant and Gale, 1931, p. 376.

*Type Locality.* Beach at Soquel, Monterey Bay, California.

*Range.* Forrester Island, Alaska, to Tia Juana, Lower California. Pliocene and Pleistocene of California.

## Family SANGUINOLARIIDAE

Genus *Gari* Schumacher 1817Subgenus *Gobraeus* Leach 1852

***Gari californica*** Conrad 1848, Jour. Acad. Nat. Sci. Phila., vol. 7, pl. 19, fig. 3; Proc. Acad. Nat. Sci. Phila., vol. 4, p. 121.

*References.* Dall, 1921a, p. 49; Oldroyd, 1924, p. 185; Grant and Gale, 1931, p. 382.

*Type Locality.* California.

*Range.* Aleutian Islands to San Diego, California. Japan. Kamchatka. Pliocene and Pleistocene of California.

## Family SOLENIDAE

Genus *Ensis* Schumacher 1817

***Ensis directus*** Conrad 1843, Proc. Acad. Nat. Sci. Phila., vol. 1, p. 325.

*References.* Verrill, 1873, p. 674; Whiteaves, 1901a, p. 143; Johnson, 1915, p. 75; 1934, p. 55.

*Type Locality.* Neuse River, below Newbern, North Carolina, Miocene?

*Range.* Gulf of St. Lawrence to Florida.

Genus *Siliqua* Megerle von Mühlfeld 1811

***Siliqua alta*** Broderip and Sowerby 1829, Zoöl. Jour., vol. 4, p. 362.

*References.* Oldroyd, 1924, p. 189; Grant and Gale, 1931, p. 388.

*Type Locality.* Arctic Ocean.

*Range.* Arctic Ocean and south to the Okhotsk Sea, and Cook Inlet, Alaska.

***Siliqua costata*** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 315.

*References.* Verrill, 1873, p. 675; Whiteaves, 1901a, p. 143; Johnson, 1915, p. 75; 1934, p. 55.

*Type Locality.* Great Egg Harbour, New Jersey.

*Range.* Gulf of St. Lawrence to North Carolina.

*Synonym.* *S. media* "Gray" of authors, not Gray 1830.

**Siliqua patula patula** Dixon 1789, Dixon's Voyage, p. 355.

*References.* Oldroyd, 1925, p. 190; Grant and Gale, 1931, p. 387.

*Type Locality.* Cook's River, Alaska.

*Range.* Arctic Ocean to Monterey Bay, California. Miocene of Oregon; Pliocene of California; Pleistocene of Alaska and California.

**Siliqua patula nuttallii** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 232.

*References.* Oldroyd, 1924, p. 190; Grant and Gale, 1931, p. 387.

*Type Locality.* Point Adams in the estuary of the Columbia.

*Range.* Lituya Bay, Alaska, to Monterey, California.

*Remarks.* A synonym of *S. patula* according to Grant and Gale (1931).

**Siliqua squama** Blainville 1824, Dictionnaire des Sci. Nat., vol. 49, p. 419.

*References.* Whiteaves, 1901a, p. 143; Johnson, 1915, p. 76; 1934, p. 55.

*Type Locality.* Newfoundland.

*Range.* From fishing banks off Nova Scotia and New England.

#### Genus *Solen* (L.) Scopoli 1777

**Solen sicarius** Gould 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 214.

*References.* Oldroyd, 1924, p. 188; Grant and Gale, 1931, p. 385.

*Type Locality.* "Straits of Juan de Fuca and territory of Oregon."

*Range.* Vancouver Island, British Columbia, to Lower California. Miocene of Washington, Oregon and California; Pliocene and Pleistocene of California.

#### Family MACTRIDAE

##### Genus *Mulinia* Gray 1837

**Mulinia lateralis** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 309.

*References.* Verrill, 1873, p. 680; Whiteaves, 1901a, p. 139; Johnson, 1915, p. 77; 1934, p. 55.

*Type Locality.* "Coast of the United States."

*Range.* New Brunswick to Texas and the West Indies.

##### Genus *Schizothaerus* Conrad 1853

**Schizothaerus nuttallii nuttallii** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 235.

*References.* Oldroyd, 1924, p. 196; Henderson, 1931, pp. 32-33; Grant and Gale, 1931, p. 404.

*Type Locality.* Near Santa Barbara, California.

*Range.* Cordova, Prince William Sound, Alaska, to Lower California. Japan. Miocene of Washington, Oregon, and California; Pliocene and Pleistocene of California.

**Schizothaerus nuttallii capax** Gould 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 217.

*References.* Oldroyd, 1924, p. 196; Grant and Gale, 1931, p. 404.

*Type Locality.* Puget Sound.

*Range.* Kodiak Island, Alaska, to San Pedro, California.

*Remarks.* A synonym of *S. nuttallii* Conrad according to Grant and Gale (1931).

Genus *Spisula* Gray 1838

Subgenus *Hemimacra* Swainson 1840

Section *Mactromeris* Conrad 1868

**Spisula alaskana** Dall 1894, Publ. Puget Sound Biol. Station, vol. 4, p. 59.

*Reference.* Oldroyd, 1924, p. 193.

*Type Locality.* Alaska?

*Range.* Arctic Ocean at Cape Lisburne, south of Bering Sea and the Aleutians and eastward to Puget Sound. Japan. Kurile Islands. Okhotsk Sea.

**Spisula catilliformis** Conrad 1867, Amer. Jour. Conch., vol. 3, p. 193.

*References.* Oldroyd, 1924, p. 194; Grant and Gale, 1931, p. 398.

*Type Locality.* Panama.

*Range.* Neah Bay, Washington, to San Diego, California. Miocene, Pliocene, and Pleistocene of California.

**Spisula falcata** Gould 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 216.

*References.* Oldroyd, 1924, p. 195; Grant and Gale, 1931, p. 396.

*Type Locality.* Puget Sound, Washington.

*Range.* Queen Charlotte Islands, British Columbia, and Puget Sound to Cortez Bank and Coronado Islands, Lower California. Miocene? Pliocene? and Pleistocene of California.

**Spisula polynyma** Stimpson 1860, Smithson. Misc. Coll., vol. 2, art. 6, no. 3, p. 3.

*References.* Whiteaves, 1901a, p. 139; Johnson, 1915, p. 76; Grant and Gale, 1931, p. 394; Johnson, 1934, p. 55.

*Type Locality.* None given.

*Range.* Hudson Bay to Cape Ann and Georges Bank, Massachusetts.

*Synonym.* *Mactra ovalis* Gould 1841, *non* Sowerby 1817.

**Spisula solidissima** Dillwyn 1817, Cat. Recent Shells, vol. 1, p. 140.

*References.* Verrill, 1873, p. 680; Whiteaves, 1901a, p. 139; Johnson, 1915, p. 76; 1934, p. 55.

*Type Locality.* "North America."

*Range.* Labrador to North Carolina.

**Spisula voyi** Gabb 1869, Paleont. Calif., vol. 2, p. 24.

*References.* Oldroyd, 1924, p. 193; Grant and Gale, 1931, p. 395.

*Type Locality.* Miocene or Pliocene, near Humboldt Bay, California.

*Range.* Arctic Ocean at Cape Lisburne, south to Puget Sound; Japan, Kurile Islands and Okhotsk Sea. Pliocene of Alaska and California.

#### Family MESODESMATIDAE

##### Genus *Mesodesma* Deshayes 1830

**Mesodesma arctatum** Conrad 1831, Jour. Acad. Nat. Sci. Phila., vol. 6, p. 257.

*References.* Verrill, 1873, p. 679; Whiteaves, 1901a, p. 140; Johnson, 1915, p. 77; 1934, p. 56.

*Type Locality.* "Massachusetts."

*Range.* Gulf of St. Lawrence to New Jersey.

**Mesodesma deauratum** Turton 1830, Conch. Insul. Brit., Dithyra, p. 71.

*References.* Whiteaves, 1901a, p. 140; Johnson, 1915, p. 77; 1934, p. 56.

*Type Locality.* Exmouth, England.

*Range.* Gulf of St. Lawrence to Georges Bank.

#### Family MYACIDAE

##### Genus *Cryptomya* Conrad 1848

**Cryptomya californica** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 234.

*References.* Oldroyd, 1924, p. 199; Grant and Gale, 1931, p. 417.

*Type Locality.* Santa Barbara, California.

*Range.* Chichagof Island, Alaska, to Mexico. Japan? Upper Miocene of Washington, Oregon, and California; Pliocene of California; Pleistocene of Oregon and California.

##### Genus *Mya* Linné 1758

**Mya arenaria** Linné 1758, Syst. Nat., Ed. 10, p. 670.

*References.* Verrill, 1873, p. 672; Whiteaves, 1901a, p. 148; Lorenzen A., 1903, pp. 61-62; Johnson, 1915, p. 77; Oldroyd, 1924, p. 198; Morse, 1922, pp. 28-30; Wilton, and Wilton, 1929, pp. 81-93; Grant and Gale, 1931, p. 411; Johnson, 1934, p. 56; Newcombe, 1935, pp. 97-137; Foster, 1946, p. 32.

*Type Locality.* Mouth of the Scheldt River, Netherlands, by designation of Foster (1946).

*Range.* Victoria, British Columbia, south to Monterey, California. Greenland to Florida. Pleistocene throughout the north. Miocene of Virginia and Alaska; Pliocene of Alaska, England, Sicily, California; Pleistocene of Greenland, Quebec, Ontario, New Brunswick, and Maine.

*Remarks.* The range given above may include erroneous records which belong under *M. pseudoarenaria* Schlesch (see Foster 1946, p. 34.)



**Mya intermedia** Dall 1898, Trans. Wagner Inst. Sci., vol. 3, pt. 4, p. 875.

*References.* Oldroyd, 1924, p. 199; Grant and Gale, 1931, p. 412.

*Type Locality.* Alaska.

*Range.* From Point Barrow, Arctic Ocean, to California.

*Remarks.* Grant and Gale (1931, p. 412) call this *Mya arenaria* var. *japonica* Jay 1857, Perry's U. S. Japan Exped., vol. 2, p. 292.

**Mya truncata truncata** Linné 1758, Syst. Nat., Ed. 10, p. 670.

*References.* Whiteaves, 1901a, p. 148; Johnson, 1915, p. 78; Oldroyd, 1924, p. 197; Grant and Gale, 1931, p. 414; Johnson, 1934, p. 56; Foster, 1946, p. 30.

*Type Locality.* Liverpool, England, by designation of Foster (1946).

*Range.* Arctic Ocean, and from Bering Island to Puget Sound. Greenland to Massachusetts. Circumpolar. Miocene of Alaska and Oregon; Pliocene of England, Alaska, and California; Pleistocene of Greenland, Labrador, Quebec, New Brunswick, and Maine.

**Mya truncata uddevalensis** Forbes 1846, Ann. Mag. Nat. Hist., vol. 18, p. 337.

*References.* Johnson, 1934, p. 56; Foster, 1946, p. 30.

*Type Locality.* Fossil: Clyde Beds, England.

*Range.* Greenland, 2 to 10 fms., to Labrador and Gulf of St. Lawrence.

*Remarks.* Grant and Gale (1931, p. 415) credit the name to Smith and refer to Wood, Crag Moll., Mon. Palaeont. Soc. vol. 9, p. 277, 1857. Johnson (1934, p. 56) credits the variety to Forbes 1846, possibly following Hancock (1846, p. 337) who gives the reference to the Memoirs of the Geological Survey of Great Britain but says in the next paragraph that "this species was first noticed by Mr. Smith of Jordanhill, in his paper on 'The Last Changes in the levels of land and sea in the British Islands,' Wernerian Memoirs vol. VIII, as occurring fossil in the newer Pliocene deposits at the mouth of the Clyde." I have not seen this paper and follow Foster (1946) in crediting the variety to Forbes.

#### Genus *Sphenia* Turton 1822

**Sphenia fragilis** Carpenter 1857, Mazatlan Catalogue, p. 24.

*Reference.* Oldroyd, 1924, p. 200.

*Type Locality.* Mazatlan, Mexico.

*Range.* Vancouver Island, British Columbia, to Mazatlan, Mexico.

**Sphenia ovoidea** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 637.

*Reference.* Oldroyd, 1924, p. 200.

*Type Locality.* Puget Sound.

*Range.* Aleutian Islands to Puget Sound.



## Family SAXICAVIDAE

Genus *Cyrtodaria* "Daudin" 1799 Reuss 1800***Cyrtodaria kurriana*** Dunker 1862, Malak. Blatt., p. 38.*Reference.* Oldroyd, 1924, p. 208.*Type Locality.* West Coast of Greenland.*Range.* Arctic Ocean and south to Norton Sound, Alaska. Greenland.*Remarks.* The exact range of this species in Canadian Arctic waters is not known, nor is its southern limit. Johnson (1934) does not mention it, and I have found no record for it in the literature except those cited above. It is possible that specimens identified with the next species belong under *C. kurriana*.***Cyrtodaria siliqua*** Spengler 1793, Skriv. Nat.-Selsk., Kjobenhavn, vol. 3, pt. 1, p. 48.*References.* Whiteaves, 1901a, p. 150; Johnson, 1915, p. 78; 1934, p. 57.*Type Locality.* Newfoundland.*Range.* Arctic Ocean to Georges Bank, 5 to 50 fms.Genus *Panope* Ménéard 1807***Panope generosa generosa*** Gould 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 215.*References.* Chace, 1914, p. 47; Oldroyd, 1924, p. 205; Grant and Gale, 1931, p. 424.*Type Locality.* Nisqually, Puget Sound.*Range.* Puget Sound to Lower California; Gulf of California; Japan. Miocene of Oregon and California; Pliocene of Japan and California; Pleistocene of California.***Panope generosa solida*** Dall 1898, Trans. Wagner Inst., vol. 3, pt. 4, p. 831.*References.* Oldroyd, 1924, p. 206; Grant and Gale, 1931, p. 424.*Type Locality.* Head of the Gulf of California.*Range.* Straits of Juan de Fuca to the Gulf of California.*Remarks.* A synonym of *P. generosa* Gould according to Grant and Gale (1931).Subgenus *Panomys* Gray 1857***Panope ampla*** Dall 1898, Trans. Wagner Inst. Sci., vol. 3, pt. 4, p. 883.*References.* Oldroyd, 1924, p. 207; Grant and Gale, 1931, p. 426.*Type Locality.* Aleutian Region.*Range.* Arctic Ocean, Aleutian Islands to Puget Sound. Miocene of Oregon; Pliocene of Alaska and California; Pleistocene of the North Pacific, Bering and Okhotsk seas, and California.

**Panope arctica** Lamarck 1818, Anim. sans Vert., vol. 5, p. 458.

*References.* Whiteaves, 1901a, p. 150; Johnson, 1915, p. 79; Grant and Gale, 1931, p. 426; Johnson, 1934, p. 57; McLean, 1935, pp. 34-35.

*Type Locality.* Arctic Ocean, White Sea.

*Range.* Arctic Ocean to Georges Bank, 25 to 115 fms. Circumpolar. Pleistocene of Quebec.

**Panope beringiana** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 416.

*Reference.* Oldroyd, 1924, p. 207.

*Type Locality.* Station 3529, near Pribiloff Islands, 56 fms.

*Range.* Eastern Bering Sea.

**Panope turgida** Dall 1916, Proc. U. S. Nat. Mus., vol. 52, p. 416.

*Reference.* Oldroyd, 1924, p. 206.

*Type Locality.* Popoff Strait, Shumagin group, Alaska.

*Range.* Unalaska to the Shumagin Islands, Alaska.

Genus *Saxicava* Fleuriau de Bellevue 1802

**Saxicava arctica** Linné 1767, Syst. Nat., Ed. 12, p. 1113.

*References.* Verrill, 1873, p. 671; Whiteaves, 1901a, p. 149; Johnson, 1915, p. 78; Oldroyd, 1924, p. 208; Grant and Gale, 1931, p. 427; Johnson, 1934, p. 57.

*Type Locality.* "Oceano Norvegico."

*Range.* Arctic Ocean to Panama. Greenland to the West Indies, 1 to 100 fms. Europe. Pleistocene of Pacific, Arctic, and East Coast regions.

**Saxicava pholadis** Linné 1767, Mantissa, vol. 2, p. 548.

*References.* Hancock, 1846, p. 337; Oldroyd, 1924, p. 209; Grant and Gale, 1931, p. 428; Johnson, 1934, p. 57.

*Type Locality.* Greenland.

*Range.* Arctic Ocean to Panama. Greenland. Circumpolar. Pliocene of Alaska; Pleistocene of Northwest Territories of Canada.

Family PHOLADIDAE

Genus *Barnea* "Leach" Risso 1826

**Barnea truncata** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 321.

*References.* Verrill, 1873, p. 670; Morse, 1902, p. 8; Johnson, 1915, p. 79; 1934, p. 58.

*Type Locality.* Southern coast of the United States.

*Range.* Maine to the Gulf of Mexico.

Genus *Pholadidea* Turton 1819

**Pholadidea ovoidea** Gould 1851, Proc. Boston Soc. Nat. Hist. vol. 4, p. 87.

*References.* Oldroyd, 1924, p. 212; Grant and Gale, 1931, p. 434.

*Type Locality.* Monterey, California.

*Range.* Bering Sea to the Gulf of California. Pliocene? and Pleistocene of California.

**Pholadidea penita penita** Conrad 1837, Jour. Acad. Nat. Sci. Phila., vol. 7, p. 237.

*References.* Oldroyd, 1924, p. 211; Grant and Gale, 1931, p. 434.

*Type Locality.* Near San Diego, California.

*Range.* Chirikoff Islands, Alaska, to San Diego, California. Miocene of Oregon; Pliocene and Pleistocene of California.

**Pholadidea penita concamerata** Deshayes 1839, Rev. Zoöl. Soc. Cuv., p. 324.

*References.* Oldroyd, 1924, p. 211; Grant and Gale, 1931, p. 434.

*Type Locality.* Monterey, California.

*Range.* Bering Sea and Islands to San Diego, California. Pleistocene of California.

*Remarks.* A synonym of *P. penita* Conrad according to Grant and Gale.

**Pholadidea penita sagitta** Stearns 1916, Proc. U. S. Nat. Mus., vol. 52, p. 417.

*Reference.* Oldroyd, 1924, p. 212.

*Type Locality.* Monterey, California.

*Range.* Puget Sound to Socorro Island, California.

#### Subgenus *Nettastomella* Carpenter 1865

**Pholadidea rostrata** Valenciennes 1846, Voyage of the Venus, Atlas, pl. 24, figs. 4, 4a.

*Reference.* Oldroyd, 1924, p. 213.

*Type Locality.* Not known.

*Range.* Vancouver Island, British Columbia, to San Diego, California.

#### Genus *Xylophaga* Turton 1822

**Xylophaga abyssorum** Dall 1886, Bull. Mus. Comp. Zoöl., vol. 12, No. 6, p. 317.

*Reference.* Johnson, 1934, p. 59.

*Type Locality.* "Blake" Station 215, 226 fms.

*Range.* North Atlantic to the West Indies, 226 to 1,500 fms.

**Xylophaga dorsalis** Turton 1822, Conch. Insul. Brit., p. 253.

*References.* Whiteaves, 1901a, p. 151; Johnson, 1915, p. 80; 1934, p. 59.

*Type Locality.* Devonshire Coast.

*Range.* Gulf of St. Lawrence to the Gulf of Maine, 100 to 110 fms. Off Martha's Vineyard, 252 to 302 fms.

**Xylophaga washingtona** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 32.

*Reference.* Oldroyd, 1924, p. 216.

*Type Locality.* San Juan Island, Washington.

*Range.* Puget Sound, Departure Bay, British Columbia, and off Oregon and Washington coasts.

Genus *Zirfaea* "Leach" Gray 1847

***Zirfaea crispata*** Linné 1758, Syst. Nat., Ed. 10, vol. 1, p. 670.

*References.* Verrill, 1873, p. 671; Whiteaves, 1901a, p. 151; Johnson, 1915, p. 80; Grant and Gale, 1931, p. 432; Johnson, 1934, p. 58.

*Type Locality.* Not known.

*Range.* Labrador to South Carolina.

***Zirfaea gabbi*** Tryon 1863, Proc. Acad. Nat. Sci. Phila., vol. 15, p. 144.

*Reference.* Oldroyd, 1924, p. 210; Grant and Gale, 1931, p. 432.

*Type Locality.* Japan.

*Range.* Bering Sea and islands south to San Diego, California. Japan. Miocene?, Pliocene, and Pleistocene of California.

## Family TEREDIDAE

Genus *Bankia* Gray 1842

***Bankia setacea*** Tryon 1863, Proc. Acad. Nat. Sci. Phila., 1863, p. 144.

*References.* Oldroyd, 1924, p. 216; White, 1929, pp. 19-25; Grant and Gale, 1931, p. 930.

*Type Locality.* San Francisco Bay, California.

*Range.* Unalaska, Alaska, to San Francisco, California.

Genus *Teredo* Linné 1768

***Teredo dilatata*** Stimpson 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 113.

*References.* Verrill, 1873, p. 670; Whiteaves, 1901a, p. 151; Johnson, 1934, p. 59.

*Type Locality.* Lynn, Mass.

*Range.* Sable Island (Whiteaves); Casco Bay, Maine, to North Carolina (Johnson).

***Teredo nana*** Turton 1822, Conch. Insul. Brit., p. 16.

*References.* Verrill, 1873, p. 670; Johnson, 1915, p. 81; 1934, p. 59.

*Type Locality.* Torbay, England.

*Range.* Arctic Ocean to North Carolina.

***Teredo navalis*** Linné 1758, Syst. Nat., Ed. 10, p. ?

*References.* Verrill, 1873, p. 669; Whiteaves, 1901a, p. 151; Johnson, 1915, p. 80; Blum, 1922, pp. 349-368; Dore and Miller, 1922, pp. 383-400; Bartsch, 1923, p. 31; Grave, 1928, pp. 260-282; Johnson, 1934, p. 59; Needler and Needler, 1940, pp. 8-10.

*Type Locality.* Not located.

*Range.* North Atlantic to Florida.

***Teredo norvegica*** Spengler 1792, Skriv. Nat.-Selsk. Kjobenhavn, vol. 2, pt. 1, p. 102.

*References.* Johnson, 1915, p. 81; 1934, p. 59.

*Type Locality.* "Friedriksvaerns Havn I Norge."

*Range.* Maine to Florida.

**Teredo novangliae** Bartsch 1922, U. S. Nat. Mus., Bull. 122, p. 19.

*Reference.* Johnson, 1934, p. 59.

*Type Locality.* Woods Hole, Massachusetts.

*Range.* Gulf of St. Lawrence to New York.

Genus *Xylotrya* Leach 1830

**Xylotrya bipennata** "Turton" Jeffreys 1860, Ann. Mag. Nat. Hist. (3) vol. 6, p. 126.

*Reference.* Johnson, 1934, p. 60.

*Type Locality.* Not located.

*Range.* North Atlantic to Florida.

FRESHWATER SPECIES

Order **Prionodesmacea**

Family MARGARITIFERIDAE

Genus *Margaritifera* Schumacher 1816

**Margaritifera margaritifera margaritifera** Linné 1758, Syst. Nat., Ed. 10, p. 671.

*References.* Dall, 1905a, p. 132; Simpson, 1914, p. 513; Johnson, 1915, p. 28; Frierson, 1927, p. 24; LaRocque and Oughton, 1937, p. 151; Brooks and Brooks, 1940, pp. 66, 70-73, 75.

*Type Locality.* Europe.

*Range.* Europe; Siberia; Newfoundland; Nova Scotia, New Brunswick, Quebec; Labrador; New England and New York.

**Margaritifera margaritifera falcata** Gould 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 294.

*References.* Dall, 1905a, p. 132; Simpson, 1914, p. 516.

*Type Locality.* "Wallawalla and Sacramento."

*Range.* California; Oregon; Washington; British Columbia; Alaska.

Family UNIONIDAE

Genus *Actinonaias* Fischer and Crosse 1893

**Actinonaias carinata** Barnes 1823, Amer. Jour. Sci., vol. 6, p. 259.

*References.* Hanham, 1899, p. 4; Dall, 1905a, p. 126; Letson, 1909, p. 244; Simpson, C. T., 1914, p. 79; Baker, F. C., 1928, p. 218; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Fox River, Wisconsin.

*Range.* St. Lawrence and Mississippi drainages; southern Ontario and Manitoba. Lake St. Clair and its drainage; Lake Erie drainage; Niagara River and its tributaries; Lake Ontario.

*Remarks.* The Lake Erie record is considered erroneous.

**Actinonaias ellipsiformis** Conrad 1836, Monograph, vol. VIII, p. 60.

*References.* Baker, F. C., 1898, p. 394; Hanham, 1899, p. 5; Dall, 1905a, p. 126; Simpson, C. T., 1914, p. 128; Baker, F. C., 1928, p. 263.

*Type Locality.* Michigan.

*Range.* Mississippi drainage north of latitude 38°; St. Lawrence drainage, in part. Western New York, southern Michigan, southern Ontario; Red River of the North.

*Remarks.* The Toronto record is probably erroneous.

#### Genus *Alasmidonta* Say 1818

**Alasmidonta calceolus** Lea 1830, Trans. Amer. Phil. Soc., vol. 3, p. 265.

*Reference.* Simpson, 1914, p. 497.

*Type Locality.* Ohio.

*Range.* Upper Mississippi drainage; Ohio, Cumberland, and Tennessee rivers; Lower and middle St. Lawrence system as follows: Lake Huron; Lake St. Clair and its drainage; Detroit river; Lake Erie and its drainage; Niagara River and tributaries; Lake Ontario; Ottawa River and its tributaries.

**Alasmidonta marginata** Say 1819, Nicholson's Encycl. No. 1.

*References.* Simpson, C. T., 1914, p. 504; Johnson, 1915, p. 27.

*Type Locality.* Scioto River, Chillicothe, Ohio.

*Range.* Upper Mississippi drainage; Ohio, Cumberland, and Tennessee systems; upper Saint Lawrence drainage as follows: Lake Huron and its drainage; Lake St. Clair and its drainage; Detroit River; Lake Erie and its drainage; Niagara River and its tributaries; Lake Ontario; Ottawa River and its tributaries; St. Lawrence River.

**Alasmidonta undulata** Say 1817, Nicholson's Encycl., pl. 3, fig. 3.

*References.* Simpson, C. T., 1914, p. 494; Johnson, 1915, p. 26.

*Type Locality.* Delaware and Schuylkill rivers.

*Range.* Lower St. Lawrence drainage (including the Ottawa River) southward to North Carolina.

#### Genus *Amblema* Rafinesque 1819

**Amblema costata** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 315.

*References.* Hanham, 1899, p. 5; Dall, 1905a, p. 133; Letson, 1909, p. 245; Baker, F. C., 1928, p. 82.

*Type Locality.* Ohio River (rare); small rivers of Kentucky, common. (Rafinesque).

*Range.* Mississippi Basin, generally; St. Lawrence drainage; Red River of the North; Lake Winnipeg; Alabama river system. Great Lakes as follows: Lake Huron drainage; Lake St. Clair drainage; Detroit River; Lake Erie and its drainage, Niagara River and its tributaries.



**Amblema plicata** Say 1817, Nicholson's *Encycl.*, 1st Amer. ed., Art. Conchology, pl. 3, fig. 1.

*References.* Dall, 1905a, p. 133; Simpson, C. T., 1914, p. 814.

*Type Locality.* Lake Erie.

*Range.* Mississippi drainage; western Michigan; Red River of the North; Lake Winnipeg and the Saskatchewan; Lakes Huron and St. Clair, Detroit River, Lake Erie; Niagara River and its tributaries.

**Amblema plicata hippopaea** Lea 1845, *Proc. Amer. Phil. Soc.*, vol. 4, p. 163.

*References.* Dall, 1905a, p. 133; Simpson, C. T., 1914, p. 816.

*Type Locality.* "Lake Erie. Also, Eastern Michigan."

*Range.* Lakes Erie, Michigan, and Winnipeg (*fide* Dall).

#### Genus *Anodonta* Lamarck 1799

**Anodonta beringiana** Middendorff 1851, *Sibirische Reise*, vol. 2, p. 284.

*References.* Dall, 1905a, p. 127; Simpson, C. T., 1914, p. 373; Henderson, 1929, p. 55.

*Type Locality.* Not known.

*Range.* Bering Sea and Cook Inlet drainage; Alaska, Yukon, Fraser and Columbia river systems.

**Anodonta brooksiana** van der Schalie 1938, *Annals, Carnegie Museum*, vol. XXVII, pp. 167-170.

*Reference.* Brooks and Brooks, 1940, pp. 53-75.

*Type Locality.* Spout Pond Arm, Ferryland district, southern shore, Newfoundland.

*Range.* Ferryland district, three localities, and Whitbourne, Newfoundland.

**Anodonta cataracta** Say 1817, Nicholson's *Encyclopedia*, 1st ed., vol. 2, pl. 3, fig. 4.

*References.* Simpson, C. T., 1914, p. 386; Johnson, 1915, p. 24.

*Type Locality.* Not given, *fide* Simpson (1914).

*Range.* Lower St. Lawrence drainage; Atlantic drainage south to North Carolina. Michigan? North of Lake Superior?

**Anodonta grandis** Say 1829, *New Harmony Disseminator*, vol. 2, p. 341.

*References.* Dall, 1905a, p. 129; Simpson, C. T., 1914, p. 418; van der Schalie, 1941, 7 pp.

*Type Locality.* Fox River of the Wabash.

*Range.* Mississippi drainage; upper St. Lawrence system. Red River of the North; Lake Winnipeg.

**Anodonta grandis benedictensis** Lea 1834, *Trans. Amer. Phil. Soc.*, vol. 5, p. 104.

*References.* Simpson, C. T., 1914, p. 423; Johnson, 1915, p. 25.

*Type Locality.* Lake Champlain.

*Range.* St. Lawrence drainage.



**Anodonta grandis footiana** Lea 1840, Proc. Amer. Phil. Soc., vol. 1, p. 289.

*References.* Dall, 1905a, p. 129; Simpson, C. T., 1914, p. 422; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Vicinity of Fort Winnebago.

*Range.* St. Lawrence drainage. Manitoba?

**Anodonta grandis gigantea** Lea 1834, Trans. Amer. Phil. Soc., 1834, p. 1.

*References.* Dall, 1905a, p. 129; Simpson, C. T., 1914, p. 420; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Port Gibson, Miss.

*Range.* Mississippi drainage. Manitoba. Ontario?

**Anodonta imbecillis** Say 1829, New Harmony Disseminator, vol. 2, No. 23, p. 355.

*References.* Simpson, C. T., 1914, p. 395; Baker, F. C., 1928, p. 172; La Rocque and Oughton, 1937, p. 150.

*Type Locality.* Wabash River.

*Range.* Michigan side of Lake Erie; southern Michigan; North Carolina to Georgia, southwest to Mexico. Mississippi drainage.

*Remarks.* This species probably lives on the Ontario side of Lake Erie also, but so far no specimen has been taken in Canadian waters.

**Anodonta implicata** Say 1822, New Harmony Disseminator, vol. 2, No. 22, p. 340.

*References.* Dall, 1905a, p. 129; Simpson, C. T., 1914, p. 391; Johnson, 1915, p. 24; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Danvers, Mass.

*Range.* Atlantic drainage, from Virginia northward; St. Lawrence drainage; Saskatchewan basin.

**Anodonta kennerlyi** Lea 1860, Proc. Acad. Nat. Sci. Phila., vol. 4, p. 306.

*References.* Dall, 1905a, p. 128; Simpson, C. T., 1914, p. 374; Henderson, 1929, p. 57.

*Type Locality.* Chiloweyuck Depot, Puget Sound.

*Range.* Puget Sound; British Columbia, Washington, Oregon.

**Anodonta kennicottii** Lea 1861, Proc. Acad. Nat. Sci. Phila., 1861, p. 56.

*References.* Dall, 1905a, p. 130; Simpson, C. T., 1914, p. 435.

*Type Locality.* Fort Rae, Great Slave Lake and north end of Lake Winnipeg.

*Range.* Upper and Middle St. Lawrence system; Mackenzie drainage.

**Anodonta marginata** Say 1817, Nicholson's Encyclopedia, 1st Amer. ed., vol. 2, p. 19.

*References.* Dall, 1905a, p. 128; Simpson, C. T., 1914, p. 388; Johnson, 1915, p. 24.

*Type Locality.* Not given.

*Range.* St. Lawrence and Great Lakes drainages.

**Anodonta nuttalliana** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 77.

*References.* Dall, 1905a, p. 128; Simpson, C. T., 1914, p. 377; Henderson, 1929, p. 57.

*Type Locality.* Wahlamat River near its junction with the Columbia.

*Range.* California to British Columbia, east to Utah.

**Anodonta oregonensis** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 80.

*References.* Dall, 1905a, p. 128; Simpson, C. T., 1914, p. 375; Henderson, 1929, p. 58.

*Type Locality.* Wahlamat River near its junction with the Columbia.

*Range.* California, Oregon, Washington, British Columbia, and Alaska.

*Remarks.* Probably also found in the Yukon if the Alaska records are valid. Henderson (1929) is somewhat doubtful about the northern records of this species.

**Anodonta pepiniana** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 96.

*References.* Dall, 1905a, p. 130; Simpson, C. T., 1914, p. 436.

*Type Locality.* Lake Pepin, Portage County, Ohio.

*Range.* Upper and middle St. Lawrence drainage; Saskatchewan basin.

**Anodonta wahlamettensis** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 78.

*References.* Dall, 1905a, p. 128; Simpson, C. T., 1914, p. 379; Henderson, 1929, p. 59.

*Type Locality.* Wahlamat River near its junction with the Columbia.

*Range.* Utah westward; California to British Columbia.

#### Genus *Anodontoides* Simpson 1898

**Anodontoides ferussacianus** Lea 1834, Trans. Amer. Phil. Soc., vol. 5, p. 45.

*References.* Dall, 1905a, p. 131; Simpson, C. T., 1914, p. 467; Johnson, 1915, p. 25.

*Type Locality.* Ohio River at Cincinnati, Ohio.

*Range.* Mississippi drainage; St. Lawrence, Red River, and Saskatchewan basins; Lake Huron, Lake St. Clair, Lake Erie, Lake Ontario, and their drainages; St. Lawrence River, Ottawa River, and their tributaries.

**Anodontoides ferussacianus buchanensis** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 47.

*References.* Simpson, C. T., 1914, p. 479; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Buck Creek, Ohio.

*Range.* Lake Huron; Lake St. Clair; Lake Erie.

**Anodontoides ferussacianus subcylindraceus** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 106.

*References.* Simpson, C. T., 1914, p. 469; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Orleans County, New York.

*Range.* Great Lakes drainage; Great Lakes, except Lake Superior; St. Lawrence drainage.

Genus *Carunculina* Simpson 1898

***Carunculina glans*** Lea 1834, Trans. Amer. Phil. Soc., 1834, p. 82.

*Reference.* Simpson, C. T., 1914, p. 153.

*Type Locality.* Ohio River.

*Range.* Ohio River drainage; probably St. Lawrence River drainage; southern Michigan; Arkansas; Georgia.

***Carunculina parva*** Barnes 1823, Amer. Jour. Sci., vol. 6, p. 274.

*References.* Simpson, C. T., 1914, p. 151; Baker, F. C., 1928, p. 251; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Fox River.

*Range.* Lake Erie and drainage; Mississippi drainage; southern Canada and Michigan.

Genus *Cyclonaias* Pilsbry 1922

***Cyclonaias tuberculata*** Rafinesque 1820, Ann. Gén. Sci., Bruxelles, vol. 5, p. 103.

*References.* Simpson, C. T., 1914, p. 903; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Ohio River and adjacent streams.

*Range.* Lake St. Clair drainage; Detroit River and Lake Erie.

Genus *Dysnomia* Agassiz 1852

***Dysnomia rangiana*** Lea 1839, Trans. Amer. Phil. Soc., vol. 6, p. 95.

*References.* Simpson, C. T., 1914, p. 25; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Ohio River, Cincinnati, Ohio.

*Range.* Lake St. Clair, Detroit River, Lake Erie, Ohio River drainage.

***Dysnomia sulcata delicata*** Simpson 1900, Synopsis of the Naiades, p. 520.

*References.* Simpson, C. T., 1914, p. 16; La Rocque and Oughton, 1937, p. 150.

*Type Locality.* Detroit River, Michigan.

*Range.* Detroit River.

***Dysnomia triquetra*** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 13, p. 300.

*References.* Simpson, C. T., 1914, p. 5; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Falls of the Ohio.

*Range.* Lake Huron, Lake St. Clair and its drainage, Detroit River, Lake Erie and its drainage.

Genus *Elliptio* Rafinesque 1819

**Elliptio complanatus** Dillwyn 1817, Catalogue, vol. I, p. 51.

*References.* Dall, 1905a, p. 133; Simpson, C. T., 1914, p. 651; Johnson, 1915, p. 27; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* "Maryland and New Jersey."

*Range.* Entire Atlantic drainage from Georgia to the St. Lawrence system. Saskatchewan River; Hudson Bay drainage.

**Elliptio crassidens** Lamarck 1819, Animaux sans Vertèbres, vol. 6, p. 71.

*References.* Simpson, C. T., 1914, p. 606; La Rocque and Oughton, 1937, p. 151.

*Type Locality.* "Mississippi and other rivers and lakes."

*Range.* Recorded by Nicholson and Robertson from Toronto, but erroneously. Mississippi drainage generally; southeastern United States.

**Elliptio dilatatus** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 297.

*References.* Baker, F. C., 1928, p. 124; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Ohio River.

*Range.* Entire Mississippi drainage; St. Lawrence and tributaries; Alabama River system southeast to Florida, southwest to Texas.

*Remarks.* This species is not found in all tributaries of the St. Lawrence. It is not known above the Chaudière Falls in the Ottawa River, nor is it found in the Hudson Bay drainage, and Lake Erie. Its apparent absence from Lake St. Clair (La Rocque and Oughton, 1937) is thought to be due to lack of records.

**Elliptio dilatatus sterkii** Grier 1918, Nautilus, vol. 32, p. 9.

*Reference.* La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Lake Erie, Presque Isle Bay, Erie Co., Pennsylvania.

*Range.* Lake Erie; Lake St. Clair; Lake Winnebago; Lake Huron.

Genus *Fusconaia* Simpson 1900

**Fusconaia flava** Rafinesque 1820, Monogr., p. 305.

*References.* Baker, F. C., 1928, p. 53; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Small tributaries of Kentucky, Salt, and Green rivers.

*Range.* Western New York to Kansas and Nebraska; Red River of the North south to Kentucky and West Virginia. Southern Ontario.

**Fusconaia flava parvula** Grier 1918, Nautilus, vol. 32, p. 11.

*References.* Baker, F. C., 1928, p. 58; La Rocque and Oughton, 1937, p. 150.

*Type Locality.* Lake Erie, Presque Isle Bay, Erie Co., Pennsylvania.

*Range.* Western part of Lake Erie; Indiana; Wisconsin; Lake St. Clair; Lake Huron.

**Fusconaia subrotunda** Lea 1831, Trans. Amer. Phil. Soc., vol. 4, p. 117.

*References.* Simpson, C. T., 1914, p. 892; La Rocque and Oughton, 1937, p. 150.

*Type Locality.* Ohio.

*Range.* Recorded for Detroit River, but record doubted by La Rocque and Oughton (1937). The Grand River, Ontario, record by Simpson, is an error for *Pleurobema cordatum coccineum* (La Rocque and Oughton, 1937).

**Fusconaia undata** Barnes 1823, Amer. Jour. Sci., vol. 6, p. 121.

*References.* Simpson, C. T., 1914, p. 880; Baker, F. C., 1928, p. 59; La Rocque and Oughton, 1937, p. 150.

*Type Locality.* Wisconsin and Fox Rivers, Wisconsin.

*Range.* "Entire Mississippi drainage; Coosa River, Alabama; Michigan and upper St. Lawrence drainage." (Simpson, 1914).

*Remarks.* La Rocque and Oughton (1937) have seen no authentic specimens from Ontario, in spite of Simpson's statement concerning the range of this species.

#### Genus *Gonidea* Conrad 1857

**Gonidea angulata** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 97.

*References.* Dall, 1905a, p. 130; Simpson, C. T., 1914, p. 463; Henderson, 1929, p. 60.

*Type Locality.* Lewis' River.

*Range.* California to British Columbia, east to Idaho.

#### Genus *Lampsilis* Rafinesque 1820

**Lampsilis cariosa** Say 1817, Nicholson's Encyclopedia, II, pl. 3, fig. 2.

*References.* Simpson, C. T., 1914, p. 43; Johnson, 1915, p. 21; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Delaware and Schuylkill rivers.

*Range.* Atlantic drainage from Georgia to the Lower St. Lawrence. Lake Ontario and Ottawa River and their tributaries.

*Remarks.* Many of the records included under *L. ventricosa* may belong under this species.

**Lampsilis fasciola** Rafinesque 1820, Ann. Gén. Sci., Bruxelles, vol. 5, p. 299.

*References.* Simpson, C. T., 1914, p. 200; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Kentucky River.

*Range.* Great Lakes and their drainage.

**Lampsilis ochracea** Say 1817, Nicholson's Encyclopedia, II, pl. II, fig. 8.

*References.* Simpson, C. T., 1914, p. 49; Johnson, 1915, p. 21; La Rocque and Oughton, 1937, p. 150.

*Type Locality.* Delaware and Schuylkill Rivers.

*Range.* "Atlantic drainage, from New England to the Ogeechee River, Georgia" (Simpson, 1914). "All Ontario records appear doubtful" (La Rocque and Oughton, 1937).

**Lampsilis radiata** Gmelin 1792, Syst. Nat., Ed. 13, vol. 6, p. 3220.

*References.* Johnson, 1915, p. 22; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Virginia.

*Range.* St. Lawrence and Atlantic drainage. Manitoba. Hudson Bay drainage.

**Lampsilis radiata borealis** A. F. Gray 1882, Trans. Ottawa Field-Nat. Club, 1882, p. 53.

*References.* Dall, 1905a, p. 126; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Duck Island, Ottawa River, Ontario.

*Range.* St. Lawrence drainage to Lake Michigan; Lake of the Woods. Hudson Bay, Lake Huron, and Lake Ontario records are questioned by La Rocque and Oughton (1937).

**Lampsilis siliquoidea** Barnes 1823, Amer. Jour. Sci., vol. 6, p. 269.

*References.* Dall, 1905a, p. 125; Simpson, C. T., 1914, p. 60; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Wisconsin River.

*Range.* Mississippi drainage. Canada east of the Rockies, north to Mackenzie River.

*Remarks.* La Rocque and Oughton (1937) note the absence of this species in the Lake Superior drainage and Lake Ontario.

**Lampsilis siliquoidea rosacea** De Kay 1843, Zoöl. of New York, vol. 5, p. 192.

*References.* Simpson, C. T., 1914, p. 62; Johnson, 1915, p. 22; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Seneca Lake, New York.

*Range.* St. Lawrence and Mackenzie drainages.

**Lampsilis superiorenensis** Marsh 1897, Nautilus, vol. 10, p. 103.

*References.* Simpson, C. T., 1914, p. 62; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Michipicoten River, north shore of Lake Superior.

*Range.* Lake Superior and its drainage; Lake Huron drainage; Hudson Bay drainage.

**Lampsilis ventricosa** Barnes 1823, Amer. Jour. Sci., vol. 6, p. 267.

*References.* Dall, 1905a, p. 125; Simpson, C. T., 1914, p. 38; Johnson, 1915, p. 21; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* "Wisconsin River; Mississippi River, Prairie du Chien, Wisconsin."

*Range.* Entire Mississippi drainage; St. Lawrence system; southern drainage of Hudson Bay. Pleistocene, interglacial, Don beds, Toronto, Ontario.

*Remarks.* See note on *Lampsilis cariosa* above.



**Lampsilis ventricosa canadensis** Lea 1857, Proc. Acad. Nat. Sci. Phila., 1857, p. 85.

*References.* Simpson, C. T., 1914, p. 40; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* ?

*Range.* Hudson Bay; Lake Huron; Lake St. Clair; Lake Erie; doubtfully, Lake Ontario, St. Lawrence and its tributaries, Ottawa River and its tributaries.

Genus *Lasmigona* Rafinesque 1831

**Lasmigona complanata** Barnes 1823, Amer. Jour. Sci., vol. 6, p. 278.

*References.* Dall, 1905a, p. 131; Simpson, C. T., 1914, p. 490; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Wisconsin; Fox River.

*Range.* Hudson Bay drainage; Detroit River (doubtful). Mississippi drainage; upper St. Lawrence and tributaries north into Mackenzie River.

**Lasmigona complanata katherinae** Lea 1838, Synopsis, p. 35.

*References.* Dall, 1905a, p. 131; Simpson, C. T., 1914, p. 492; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* "Lake Superior. Also Lake Winnipeg; Saginaw Bay, Mich."

*Range.* Lake Superior (doubtful); Lake Huron. Mackenzie River?

**Lasmigona compressa** Lea 1829, Trans. Amer. Phil. Soc., 1829, p. 450.

*References.* Simpson, C. T., 1914, p. 481; Johnson, 1915, p. 25; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* "Ohio; Norman's Kill, Albany, N. Y."

*Range.* Hudson Bay drainage; St. Lawrence drainage; Ohio drainage; west to Saskatchewan, Nebraska, eastern Iowa, and Wisconsin. Hudson River, New York.

**Lasmigona costata** Rafinesque 1820, Ann. Gén. Sci., Bruxelles, vol. 5, p. 318.

*References.* Dall, 1905a, p. 131; Simpson, C. T., 1914, p. 488; Johnson, 1915, p. 26; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Kentucky River.

*Range.* Mississippi and St. Lawrence basins. Manitoba.

**Lasmigona costata eriganensis** Grier 1918, Nautilus, vol. 32, p. 10.

*Reference.* La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Lake Erie.

*Range.* Lakes St. Clair and Erie; Niagara River and its tributaries.

Genus *Leptodea* Rafinesque 1820

**Leptodea fragilis** Rafinesque 1820, Ann. Gén. Sci., Bruxelles, vol. 5, p. 295.

*References.* Simpson, C. T., 1914, p. 181; Baker, F. C., 1928, p. 234; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Ohio River.

*Range.* St. Lawrence drainage; Mississippi drainage. Red River of the North; Hudson River; eastern Texas.



**Leptodea fragilis lacustris** F. C. Baker 1922, Nautilus, vol. 35, p. 131.

*References.* Baker, F. C., 1928, p. 237; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Lake Butte des Morts, off Plummer's Point.

*Range.* Lakes St. Clair, Erie, and Ontario; Niagara River and tributaries (doubtful).

**Leptodea leptodon** Rafinesque 1820, Ann. Gén. Sci., Bruxelles, vol. 5, p. 295.

*References.* Simpson, C. T., 1914, p. 188; Baker, F. C., 1928, p. 239; La Rocque and Oughton, 1937, p. 150.

*Type Locality.* Lower Ohio River.

*Range.* Upper Mississippi River drainage; Souris River, Manitoba; Detroit River; Buffalo, New York; southern Michigan; southward to Tennessee River.

#### Genus *Ligumia* Swainson 1840

**Ligumia nasuta** Say 1817, Nicholson's Encycl., 1st Amer. Ed., pl. 4, fig. 1.

*References.* Simpson, C. T., 1914, p. 97; Johnson, 1915, p. 22; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Delaware and Schuylkill rivers.

*Range.* St. Lawrence drainage; Atlantic drainage south to North Carolina.

**Ligumia recta** Lamarck 1819, Anim. sans Vertèbres, vol. 6, p. 74.

*References.* Dall, 1905a, p. 126; Simpson, C. T., 1914, p. 95; Johnson, 1915, p. 22; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Lake Erie.

*Range.* Mississippi drainage; St. Lawrence system; Red River of the North; Alabama River drainage. Pleistocene, Don beds, Toronto.

**Ligumia recta latissima** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 297.

*References.* Baker, F. C., 1928, p. 257; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Ohio River.

*Range.* Western New York and Pennsylvania; west to Iowa and Kansas; north to Minnesota and Manitoba; Manitoba, Ontario, and Quebec, south to Alabama, Georgia, and Arkansas.

#### Genus *Megalonaias* Utterback 1915

**Megalonaias gigantea** Barnes 1823, Amer. Jour. Sci., vol. 6, p. 119.

*References.* Dall, 1905a, p. 133; Simpson, C. T., 1914, p. 825; Baker, F. C., 1928, p. 69.

*Type Locality.* Mississippi River, Prairie du Chien, Wisconsin.

*Range.* Mississippi basin generally. Red River of the North, Manitoba.

*Synonym.* *Unio heros* Say 1829.

Genus *Micromya* Agassiz 1852

**Micromya fabalis** Lea 1831, Trans. Amer. Phil. Soc., vol. 4, p. 86.

*References.* Simpson, C. T., 1914, p. 33; La Rocque and Oughton, 1937, p. 152.

*Type Locality.* Ohio River.

*Range.* Lake St. Clair drainage; Detroit River and Lake Erie. New York. Ohio River drainage.

**Micromya iris iris** Lea 1830, Trans. Amer. Phil. Soc., vol. 3, p. 439.

*References.* Simpson, C. T., 1914, p. 114; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Ohio.

*Range.* St. Lawrence drainage; west to southern Michigan; Ohio River system; Illinois and Wisconsin.

**Micromya iris novi-eboraci** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 104.

*References.* Simpson, C. T., 1914, p. 116; Baker, F. C., 1928, p. 260; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Oak Orchard Creek, Orleans County, New York.

*Range.* Western New York and Pennsylvania west to Wisconsin, north to Ontario and North Dakota, south to Illinois and Ohio.

Genus *Obliquaria* Rafinesque 1820

**Obliquaria reflexa** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 306.

*References.* Simpson, C. T., 1914, p. 330; Baker, F. C., 1928, p. 210; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Kentucky River and Letart Falls, Meigs Co., Ohio.

*Range.* Western Pennsylvania west to Iowa, Kansas, and Oklahoma; south to Louisiana, Texas, and Georgia; north to Michigan, Ontario, and Minnesota.

Genus *Obovaria* Rafinesque 1819

**Obovaria leibii** Lea 1862, Proc. Acad. Nat. Sci. Phila., vol. 6, p. 168.

*References.* Simpson, C. T., 1914, p. 296; La Rocque and Oughton 1937, p. 153.

*Type Locality.* Erie County, Michigan.

*Range.* Lake Erie and drainage; southern Michigan; Ontario.

**Obovaria olivaria** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 314.

*References.* Simpson, C. T., 1914, p. 299; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Kentucky River.

*Range.* Western Pennsylvania and western New York west to Missouri, Iowa, and Kansas; south to Arkansas, Kentucky, and northern Alabama; north to Minnesota, Michigan, Ontario, and Quebec.

Genus *Pleurobema* (Rafinesque 1820) Agassiz

**Pleurobema clava** Lamarek 1819, Anim. sans Vert., vol. 6, p. 74.

*References.* Simpson, C. T., 1914, p. 735; La Rocque and Oughton, 1937, p. 151.

*Type Locality.* Lake Erie (incorrectly).

*Range.* Ohio, Cumberland, and Tennessee river systems, Maumee Basin, western New York, Iowa?, Minnesota, and Nebraska.

*Remarks.* The western New York record has been questioned by Ortmann. The Ottawa River record is certainly erroneous.

**Pleurobema cordatum coccineum** Conrad 1836, Monogr., vol. 3, p. 29.

*References.* Simpson, C. T., 1914, p. 883; La Rocque and Oughton, 1937, p. 150.

*Type Locality.* Mahoning River, near Pittsburgh, Pa.

*Range.* Upper Mississippi drainage. St. Lawrence Basin in various localities. Grand River, Ontario.

**Pleurobema cordatum pauperculum** Simpson 1900, Synopsis, p. 789.

*References.* Simpson, C. T., 1914, p. 863; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Niagara Falls.

*Range.* St. Lawrence Basin at and near Niagara Falls.

**Pleurobema pyramidatum** Lea 1834, Trans. Amer. Phil. Soc., vol. 4, p. 109.

*Reference.* Simpson, C. T., 1914, p. 888.

*Type Locality.* Ohio.

*Range.* Don Beds, Toronto (interglacial).

Genus *Proptera* Rafinesque 1819

**Proptera alata alata** Say 1817, Nicholson's Encycl., 1st Amer. Ed., vol. II, pl. 4, fig. 2.

*References.* Dall, 1905a, p. 126; Simpson, C. T., 1914, p. 163; Johnson, 1915, p. 23; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Not given. Lake Erie?

*Range.* St. Lawrence drainage, upper Mississippi drainage; Manitoba; Red River of the North.

**Proptera alata megaptera** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 300.

*References.* Baker, F. C., 1928, p. 126; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Ohio River.

*Range.* Ohio and Mississippi valleys, eastern New York and Ottawa west to eastern Kansas, north to Red River of the North and south to Tennessee and northern Alabama.

Genus *Ptychobranchus* Simpson 1900

***Ptychobranchus fasciolare*** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 37.

*Reference.* La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Ohio, Wabash, and Kentucky rivers.

*Range.* Ohio, Tennessee, and Cumberland river systems; Lower Peninsula of Michigan; Kansas; Arkansas; Indian Territory; Louisiana. In Ontario: Lake St. Clair and drainage; Detroit River; Lake Erie and drainage; Niagara River and tributaries. Pleistocene, Don beds, Toronto, Ontario.

Genus *Quadrula* Rafinesque 1820

***Quadrula pustulosa pustulosa*** Lea 1831, Trans. Amer. Phil. Soc., vol. 4, p. 76.

*References.* Simpson, C. T., 1914, p. 848; Baker, F. C., 1928, p. 90; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Ohio (and incorrectly Alabama) rivers.

*Range.* Entire Mississippi drainage; Michigan; Lake Erie. Pleistocene, Don Beds, Toronto, Ontario.

***Quadrula pustulosa schoolcraftensis*** Lea 1834, Trans. Amer. Phil. Soc., vol. 5, p. 37.

*References.* Simpson, C. T., 1914, p. 850; La Rocque and Oughton, 1937, p. 151.

*Type Locality.* Fox River of Green Bay, Wisconsin.

*Range.* Mississippi valley. Recorded for Lake Erie. Pleistocene, Don beds, Toronto.

*Remarks.* La Rocque and Oughton (1937) have seen no authentic recent specimens from Ontario.

***Quadrula quadrula*** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 307.

*References.* Baker, F. C., 1928, p. 84; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Ohio River.

*Range.* Mississippi drainage; St. Lawrence basin; Red River of the North; southwest into eastern Texas.

***Quadrula solida*** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 13.

*Reference.* Simpson, C. T., 1914, p. 885.

*Type Locality.* Ohio River, Cincinnati; Mahoning River, Ohio.

*Range.* Ohio, Cumberland, and Tennessee River systems; south to Louisiana; west to Arkansas and Kansas; north to Minnesota; east, through Wisconsin, Illinois, and Indiana, to Ohio. Pleistocene, Don beds, Toronto.

Genus *Simpsoniconcha* Frierson 1914

**Simpsoniconcha ambigua** Say 1825, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 131.

*References.* Simpson, C. T., 1914, p. 325; La Rocque and Oughton, 1937, p. 151.

*Type Locality.* "Northwestern Territory."

*Range.* Ohio River system; north to Michigan; west to Iowa; south to Arkansas; east to Tennessee. Lake Erie and Detroit River.

*Remarks.* No authentic Ontario specimens have been seen by La Rocque and Oughton (1937).

Genus *Strophitus* Rafinesque 1820

**Strophitus rugosus** Swainson 1822, Zoöl. Illinois, 1st ser., vol II, pl. xvi.

*References.* Dall, 1905a, p. 127; Baker, F. C., 1928, p. 198; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* "United States."

*Range.* Mississippi drainage; St. Lawrence drainage; Atlantic drainage to North Carolina; Lake Winnipeg; southwest to central Texas; Tyner, Alabama.

Genus *Truncilla* Rafinesque 1820

**Truncilla donaciformis** Lea 1828, Trans. Amer. Phil. Soc., vol. 3, p. 267.

*References.* Baker, F. C., 1928, p. 228; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Ohio.

*Range.* Western Pennsylvania west to Kansas, north to Minnesota, south to eastern Texas and Alabama.

**Truncilla truncata** Rafinesque 1820, Ann. Gén. Sci. Phys., Bruxelles, vol. 5, p. 301.

*References.* Baker, F. C., 1928, p. 224; La Rocque and Oughton, 1937, p. 153.

*Type Locality.* Ohio River.

*Range.* Mississippi drainage generally. Western Pennsylvania west to Iowa and Kansas, north to Minnesota and Michigan, south to northern Alabama, Tennessee, Louisiana, and Texas.

Order **Teleodesmacea**

## Family SPHAERIIDAE

NOTE. It is possible that the multitude of species described by Sterki and others in these three genera may be reduced considerably. See Brooks and Herrington, 1944, pp. 93-97.

Genus *Musculium* Link 1807

**Musculium columbianum** Sterki 1913, Nautilus, vol. 26, p. 117.

*Reference.* Sterki, 1916, p. 468.

*Type Locality.* British Columbia, vicinity of Esquimalt (first locality given).

*Range.* British Columbia, Esquimalt, Chilliwack Creek and Lake; Duncan; Quamilcham, V. I.

**Musculium declive** Sterki 1912, Nautilus, vol. 25, p. 103.

*Reference.* Sterki, 1916, p. 443.

*Type Locality.* Blue Lake, Muskegon County, Michigan (first locality given).

*Range.* Type locality and Pine Lake, Marquette County, Michigan. Gorman Lake, Renfrew County, and Ottawa, Carleton County, Ontario.

**Musculium jayense** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 157.

*References.* Dall, 1905a, p. 139; Sterki, 1916, p. 441; Baker, F. C., 1928, p. 353.

*Type Locality.* Lake Superior.

*Range.* Northern United States, from Iowa eastward; Canada and northward. Ontario, Manitoba, Alberta, Mackenzie district.

**Musculium lacustre** Müller 1774, Verm. Terr. et Fluv., vol. II. p. 204.

*References.* Sterki, 1916, p. 442; Henderson, 1929, p. 65.

*Type Locality.* Not located.

*Range.* Palearctic and Nearctic regions. Indiana, Ontario, and probably northward; British Columbia, California, Washington (Sterki, 1916).

*Remarks.* Henderson (1929) says the species does not occur in North America.

**Musculium lenticulum** (Gould) Prime 1860, Proc. Acad. Nat. Sci. Phila., 1860, p. 36.

*References.* Dall, 1905a, p. 140; Sterki, 1916, p. 445.

*Type Locality.* Carson River, California.

*Range.* California to British Columbia.

**Musculium partumeium** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 380.

*References.* Dall, 1905a, p. 139; Johnson, 1915, p. 48; Sterki, 1916, p. 441; Baker, F. C., 1928, p. 354.

*Type Locality.* Germantown, Pennsylvania.

*Range.* United States; Nebraska eastward, south to Gulf of Mexico and northward to Manitoba. Ontario, Quebec, and Manitoba.

**Musculium parvum** Sterki 1909, Nautilus, vol. 23, p. 67.

*References.* Latchford, 1913, p. 20; Johnson, 1915, p. 50; Sterki, 1916, p. 445.

*Type Locality.* Swamp near Uhrichsville, Ohio.

*Range.* Type locality and Stark and Summit counties, Ohio. Ottawa, Ontario; Indiana; New York; Maine.



**Musculium raymondi** J. G. Cooper 1892, Proc. Calif. Acad. Sci. (2) vol. 3, p. 74.

*References.* Dall, 1905a, p. 138; Sterki, 1916, p. 444; Henderson, 1929, p. 65.

*Type Locality.* Not located.

*Range.* California, Washington, Idaho, British Columbia.

**Musculium rosaceum rosaceum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 155.

*References.* Johnson, 1915, p. 50; Sterki, 1916, p. 442; Baker, F. C., 1928, p. 358.

*Type Locality.* Schuylkill River, Pennsylvania.

*Range.* Maine to Virginia, Quebec, Ontario, Ohio, Illinois, Mackenzie district.

**Musculium rosaceum fuliginosum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 448.

*Reference.* Latchford, 1920, p. 69.

*Type Locality.* Scott Graham Creek, Carleton County, Ontario.

*Range.* Vicinity of Ottawa, Ontario.

**Musculium ryckholti** Normand 1844, Notes sur quelques nouvelles Cyclades, p. 7.

*References.* Johnson, 1915, p. 50; Sterki, 1916, p. 443; Baker, F. C., 1928, p. 359; Henderson, 1929, p. 65.

*Type Locality.* "Europe."

*Range.* Palearctic and Nearctic regions; Maine, Connecticut, Ontario, Michigan, Iowa, South Dakota, Montana, Colorado, Wisconsin, Idaho, Washington.

**Musculium secure** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 160.

*References.* Johnson, 1915, p. 48; Sterki, 1916, p. 444; Baker, F. C., 1928, p. 360.

*Type Locality.* Fresh Pond and Cambridge Meadows, Cambridge, Massachusetts.

*Range.* East of the Rocky Mountains, but rare in the south and wanting in the Gulf States.

**Musculium steinii** A. Schmidt (original description not located).

*References.* Sterki, 1928, p. 27; Henderson, 1929, p. 66.

*Type Locality.* Not located.

*Range.* Great Lakes; Washington; British Columbia.

**Musculium transversum** Say 1829, New Harmony Disseminator, vol. 2, p. 356.

*References.* Dall, 1905a, p. 139; Johnson, 1915, p. 50; Sterki, 1916, p. 440; Baker, F. C., 1928, p. 351.

*Type Locality.* Kentucky.

*Range.* United States and Canada east of the Rocky Mountains.



**Musculium truncatum** Linsley 1845, Amer. Jour. Sci., vol. 48, p. 276.

*References.* Dall, 1905a, p. 140; Johnson, 1915, p. 49; Sterki, 1916, p. 441; Baker, F. C., 1928, p. 356.

*Type Locality.* Connecticut.

*Range.* Canada and the United States east of the Rocky Mountains.

**Musculium winkleyi winkleyi** Sterki 1909, Nautilus, vol. 23, p. 66.

*References.* Johnson, 1915, p. 50; Latchford, 1913, p. 19; 1921, p. 68.

*Type Locality.* "Old Orchard, Me., Danvers, Mass."

*Range.* Maine, Massachusetts; Ottawa, Ontario.

**Musculium winkleyi cardissum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 160.

*References.* Lermond, 1909, p. 249; Johnson, 1915, p. 48.

*Type Locality.* "Fresh Pond, near Cambridge, and at Salem, Mass."

*Range.* Massachusetts, Maine; ponds at Britannia, near Ottawa, and in Nepean township, Carleton County, Ontario.

#### Genus *Pisidium* C. Pfeiffer 1821

**Pisidium abditum** Haldeman 1841, Proc. Acad. Nat. Sci. Phila., vol. 1, p. 53.

*References.* Dall, 1905a, p. 142; Johnson, 1915, p. 51; Baker, F. C., 1928, p. 406; Henderson, 1929, p. 66.

*Type Locality.* Lancaster County, Pennsylvania.

*Range.* North America, Honduras to Alaska.

**Pisidium abortivum exiguum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 470.

*Reference.* Henderson, 1929, p. 67.

*Type Locality.* Lost Horse Creek, near Charlos, Bitter Root Mountains, Montana.

*Range.* Montana and Washington.

**Pisidium abyssorum** (Stimpson) Sterki 1898, Nautilus, vol. 11, p. 124.

*References.* Dall, 1905a, p. 143; Sterki, 1916, p. 463; Baker, F. C., 1928, p. 415.

*Type Locality.* Lake Michigan, off Racine, Wisconsin.

*Range.* Deep water of the Great Lakes and of the Lake region of northern Michigan and Minnesota.

**Pisidium adamsi adamsi** Prime 1851, Shells of New England, p. 16.

*References.* Johnson, 1915, p. 52; Sterki, 1916, p. 454; Baker, F. C., 1928, p. 385.

*Type Locality.* "Norway, Maine, Holly, Oakland Co., Mich."

*Range.* Maine to Virginia and Minnesota.

**Pisidium adamsi affine** Sterki 1901, Nautilus, vol. 15, p. 66.

*References.* Johnson, 1915, p. 57; Sterki, 1916, p. 454.

*Type Locality.* None given.

*Range.* Maine to Virginia and Minnesota.

**Pisidium aequilaterale** Prime 1852, Boston Jour. Nat. Hist., vol. 6, p. 366.

*References.* Dall, 1905a, p. 141; Johnson, 1915, p. 51; Sterki, 1916, p. 451.

*Type Locality.* Augusta, Maine.

*Range.* Maine to Michigan and westward to Alaska. Ontario.

**Pisidium altile** Anthony (original description not located).

*Reference.* Lermond, 1909, p. 250.

*Range.* Cumberland County, Maine.

**Pisidium amnicum** Müller 1774, Verm. Terr. et Fluv. Hist., vol. II, p. 205.

*Reference.* Sterki, 1916, p. 446.

*Type Locality.* Not located.

*Range.* Lake Ontario (*fide* Adamstone, 1924; Kindle, 1925).

**Pisidium arcticum** Westerlund 1883, Nachtrichtsbl. Deutsch. Malak. Gesellsch., 1883, p. 58.

*References.* Dall, 1905a, p. 144; Sterki, 1916, p. 471.

*Type Locality.* Not located.

*Range.* Port Clarence, Alaska.

**Pisidium boreale** Clessin 1890, *in* Westerlund, Fauna Pal. Reg., vol. 7, p. 32.

*Reference.* Dall, 1905a, p. 144.

*Type Locality.* Lusino, Siberia.

*Range.* Western Siberia; Port Clarence, Alaska ?.

**Pisidium clavatum** Sterki (original description not located).

*Type Locality.* Not located.

*Range.* Lake Nipigon, Ontario (Adamstone, 1924).

**Pisidium columbianum** Sterki 1913, Nautilus, vol. 26, p. 117.

*Reference.* Sterki, 1916, p. 468.

*Type Locality.* Not located.

*Range.* British Columbia, "apparently common."

**Pisidium compressum compressum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 164.

*References.* Dall, 1905a, p. 142; Johnson, 1915, p. 54; Sterki, 1916, p. 447; Baker, F. C., 1928, p. 370.

*Type Locality.* Fresh Pond, near Cambridge, Mass.

*Range.* Maine to California. Canada; Yukon.

**Pisidium compressum pellucidum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 447.

*Reference.* Baker, F. C., 1928, p. 372.

*Type Locality.* None given.

*Range.* Ontario, northern New York, Michigan, Wisconsin.

**Pisidium concumulum** Sterki (original description not located).

*Reference.* Hart, 1930, p. 104.

*Type Locality.* Not located.

*Range.* Abitibi region, Lowbush River (Hart, 1930).

**Pisidium contortum** Prime 1853, Ann. N. Y. Lyc. Nat. Hist., vol. 6, p. 65.

*References.* Johnson, 1915, p. 54; Sterki, 1916, p. 462.

*Type Locality.* Pittsfield, Massachusetts (Post-Pliocene).

*Range.* Massachusetts, Maine, Ontario, and Michigan.

**Pisidium danielsi** Sterki 1903, Nautilus, vol. 17, p. 42.

*References.* Walker, B., 1904b, p. 18; Sterki, 1916, p. 455.

*Type Locality.* Lake James, Steuben County, Indiana.

*Range.* Indiana; Oxley, Ontario; Michigan.

**Pisidium elevatum** Sterki 1906, Nautilus, vol. 19, p. 119.

*Reference.* Sterki, 1916, p. 455.

*Type Locality.* Not located.

*Range.* Ohio; Illinois; Ontario: near Britannia, Carleton County (Latchford, 1922).

**Pisidium fallax fallax** Sterki 1896, Nautilus, vol. 10, p. 20.

*References.* Johnson, 1915, p. 55; Sterki, 1916, p. 449; Baker, F. C., 1928, p. 374.

*Type Locality.* Tuscarawas River and Sugar Creek, Ohio.

*Range.* New Jersey to South Dakota; Ohio River; Lake Erie.

**Pisidium fallax mite** Sterki 1905, Nautilus, vol. 19, p. 84.

*Reference.* Sterki, 1916, p. 449.

*Type Locality.* Grand River, Michigan (first locality given).

*Range.* Ohio, Michigan, Ontario.

**Pisidium fallax errans** Sterki 1905, Nautilus, vol. 19, p. 84.

*References.* Whiteaves, 1905g, p. 5; 1906a, p. 32; Sterki, 1905, p. 84; Lermond, 1909, p. 250; Johnson, 1915, p. 55; Sterki, 1916, p. 449.

*Type Locality.* "Minnesota and Aroostook Co., Me."

*Range.* Minnesota, Maine, Iowa, Michigan; Ozhiski, Knee, and Nipigon lakes, Ontario.

*Synonym.* *P. fallax septentrionale* Sterki 1898, non Prime.

**Pisidium ferrugineum** Prime 1851, Proc. Boston, Soc. Nat. Hist., vol. 4, p. 162.

*References.* Johnson, 1915, p. 51; Sterki, 1916, p. 467; Baker, F. C., 1928, p. 426.

*Type Locality.* Cambridge, Mass.

*Range.* New England and Eastern New York west to Wisconsin.

**Pisidium furcatum furcatum** Sterki 1913, Nautilus, vol. 26, p. 118.

*Reference.* Sterki, 1916, p. 468.

*Type Locality.* Not located.

*Range.* Washington.

**Pisidium furcatum rhombicum** Sterki 1913, Nautilus, vol. 26, p. 119.

*Reference.* Sterki, 1916, p. 468.

*Type Locality.* Not located.

*Range.* Washington.

*Remarks.* Sterki placed *P. rhombicum* doubtfully under *P. furcatum* as a variety. Since his species were so finely drawn, it is left under *P. furcatum* here. It is probably a synonym of that species or of some other species in the genus *Pisidium*.

**Pisidium glabellum** Sterki 1913, Nautilus, vol. 26, p. 137.

*References.* Johnson, 1915, p. 60; Sterki, 1916, p. 454; Baker, F. C., 1928, p. 384.

*Type Locality.* Hess Lake, Newaygo County, Michigan.

*Range.* New England, New Jersey, Pennsylvania, to Ontario, Minnesota, and Manitoba.

**Pisidium glaciale** Westerlund 1883, Nachrichtsbl. Deutsch. Malak. Gesells., 1883, p. 58.

*References.* Dall, 1905a, p. 144; Sterki, 1916, p. 472.

*Type Locality.* Not located.

*Range.* Port Clarence, Alaska.

**Pisidium griseolum** Sterki 1922, Ann. Carn. Mus., vol. 13, p. 432.

*Reference.* Baker, F. C., 1928, p. 412.

*Type Locality.* Lake Winnecook, Unity, Maine.

*Range.* Maine to Wisconsin.

**Pisidium henslowanum** Sheppard 1825, Trans. Linn. Soc., vol. 14, p. 150.

*References.* Dall, 1905a, p. 145; Johnson, 1915, p. 58; Sterki, 1916, p. 448.

*Type Locality.* Suffolk, England.

*Range.* Europe; Lake Ontario; Lake Superior to Lake Winnipeg (Richardson); Lake Champlain.

**Pisidium idahoense** Roper 1890, Nautilus, vol. 4, p. 85.

*References.* Dall, 1905a, p. 141; Sterki, 1916, p. 446; Baker, 1928, p. 369.

*Type Locality.* Near Old Mission, Northern Idaho.

*Range.* Idaho, Washington, to Yukon; Lake Michigan; Prince Edward Island.

**Pisidium indianense** Sterki 1905, Nautilus, vol. 19, p. 80.

*References.* Sterki, 1916, p. 446; Whittaker, 1924, p. 10.

*Type Locality.* Lake Maxinkuckee, Indiana.

*Range.* Indiana, Lake Michigan, Lake Nipigon, Lake Ontario, Mackenzie Valley.

**Pisidium latchfordi** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 452.

*Reference.* Latchford, 1916, p. 93.

*Type Locality.* Scott Graham Creek, Carleton County, Ontario (first locality mentioned).

*Range.* Carleton County, Ontario.

**Pisidium levissimum** Sterki 1906, Nautilus, vol. 20, p. 18.

*References.* Sterki, 1916, p. 463; Baker, F. C., 1928, p. 417.

*Type Locality.* Elk Rapids, Michigan.

*Range.* Michigan and Wisconsin.

**Pisidium lilljeborgii** Clessin (original description not located).

*References.* Dall, 1905a, p. 141; Whiteaves, 1905b, p. 64; 1905g, p. 5; Walker, B., 1907, p. 180; Johnson, 1915, p. 60; Sterki, 1928, p. 25; Baker, F. C., 1928, p. 392; *ibid.* and Cahn, A. R., 1931, p. 48.

*Type Locality.* Not located.

*Range.* Michigan to Montana; Washington; Alberta; Minnesota; Yukon; Lake Champlain; Ontario; Great Lakes; Lake Simcoe; Mackenzie Valley.

**Pisidium loveni** Clessin (original description not located).

*Reference.* Sterki, 1928, p. 27.

*Type Locality.* Not located.

*Range.* St. Paul Island, Pribilof Islands, Bering Sea.

**Pisidium mainense** Sterki 1898, Nautilus, vol. 12, p. 79.

*References.* Johnson, 1915, p. 54; Sterki, 1916, p. 457.

*Type Locality.* Caribou, Aroostook County, Maine.

*Range.* Maine, Massachusetts, Ontario, Ohio, Michigan, Illinois.

**Pisidium medianum** Sterki 1899, Nautilus, vol. 13, p. 10.

*Reference.* Sterki, 1916, p. 466.

*Type Locality.* Not located.

*Range.* Ontario, Michigan, Ohio, New York, Illinois.

**Pisidium milium** Held 1836, Isis, p. 280.

*References.* Johnson, 1915, p. 56; Sterki, 1916, p. 462; Baker, F. C., 1928, p. 413.

*Type Locality.* "Europe."

*Range.* Palearctic and Nearctic regions; Maine, New York, Ontario, Michigan, Minnesota, Manitoba.

**Pisidium minus** C. B. Adams 1841, Proc. Boston Soc. Nat. Hist., vol. 1, p. 48.

*References.* Johnson, 1915, p. 52; Sterki, 1916, p. 458.

*Type Locality.* Vermont.

*Range.* Maine, Massachusetts, Ontario, New York, District of Columbia.

**Pisidium minutum** Sterki 1899, Nautilus, vol. 13, p. 11.

*References.* Lermond, 1909, p. 251; Johnson 1915, p. 56; Sterki, 1916, p. 458.

*Type Locality.* Not located.

*Range.* Shakespeare Island Lake (Cronk, 1932); Lake Nipigon (Adamstone, 1923). Maine, Massachusetts, New York.

**Pisidium monas** Sterki 1900, Nautilus, vol. 14, p. 5.

*References.* Johnson, 1915, p. 53; Sterki, 1916, p. 463.

*Type Locality.* Mountain Lake, Marquette County, Michigan.

*Range.* Lake Nipigon (Adamstone, 1923b); Northern Michigan; Maine.

**Pisidium neglectum** Sterki 1906, Nautilus, vol. 20, p. 87.

*References.* Johnson, 1915, p. 58; Sterki, 1916, p. 456; Baker, F. C., 1928, p. 389.

*Type Locality.* Krumroy, Summit County, Ohio.

*Range.* East of the Rocky Mountains, apparently rare in the south.

**Pisidium nivale** Westerlund 1883, Nachrichtsbl. Deutsch. Malak. Gesellsch., 1883, p. 58.

*References.* Dall, 1905a, p. 144; Sterki, 1916, p. 471.

*Type Locality.* Not located.

*Range.* Port Clarence, Alaska.

**Pisidium noveboracense** Prime 1853, Ann. N. Y. Lyc. Nat. Hist., vol. 6, p. 66.

*References.* Johnson, 1915, p. 59; Sterki, 1916, p. 454; Baker, F. C., 1928, p. 390.

*Type Locality.* Greenwich and Mohawk, New York.

*Range.* East of the Mississippi River; New England and New York to Illinois.

**Pisidium occidentale** Newcomb 1863, Proc. Calif. Acad. Sci., vol. 2, p. 94.

*References.* Dall, 1905a, p. 143; Sterki, 1916, p. 467.

*Type Locality.* Not located.

*Range.* California to British Columbia.

**Pisidium ohioëense** Sterki 1903, Nautilus, vol. 17, p. 20.

*References.* Sterki, 1916, p. 461.

*Type Locality.* Not located, probably Ohio.

*Range.* Maine, Massachusetts, Ohio, Michigan, Ontario.

**Pisidium overi** Sterki 1913, Nautilus, vol. 26, p. 136.

*Reference.* Sterki, 1916, p. 457.

*Type Locality.* Not located.

*Range.* South Dakota, Iowa, Minnesota.

**Pisidium ovum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 464.

*Type Locality.* Bitter Root Mountains at Ward and Charlos, Montana.

*Range.* British Columbia near Lake Atlin; Yukon Territory near Lake Como; Montana; Colorado.

**Pisidium pauperculum pauperculum** Sterki 1896, Nautilus, vol. 10, p. 64.

*References.* Johnson, 1915, p. 55; Sterki, 1916, p. 463; Baker, F. C., 1928, p. 420.

*Type Locality.* Not specifically given.

*Range.* New England and New York, to New Jersey, Ohio, Ontario, and Minnesota.

**Pisidium pauperculum nylanderi** Sterki 1898, Nautilus, vol. 11, p. 125.

*References.* Lermond, 1909, p. 251; Johnson, 1915, p. 55.

*Type Locality.* Not located.

*Range.* Maine; Lake Nipigon (Adamstone, 1923b); Lake Simcoe (Rawson, 1930); Michigan.

**Pisidium pauperculum sulphureum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 464.

*Type Locality.* Mountain Lake, Marquette County, Michigan. (first locality given).

*Range.* Michigan, Ontario: Lake Nipissing.

**Pisidium politum** Sterki 1895, Nautilus, vol. 9, p. 75.

*References.* Johnson, 1915, p. 57; Sterki, 1916, p. 458.

*Type Locality.* Not located.

*Range.* New York, Pennsylvania, Ohio, Ontario, to Illinois and Minnesota.

**Pisidium proximum** Sterki 1906, Nautilus, vol. 20, p. 5.

*Reference.* Sterki, 1916, p. 468.

*Type Locality.* "Washington; British Columbia."

*Range.* British Columbia; Washington.

**Pisidium pulchellum** Jenyns 1832, Trans. Phil. Soc. Cambridge 1832, p. 306.

*References.* Dall, 1905a, p. 144; Sterki, 1916, p. 472.

*Type Locality.* Not located.

*Range.* Europe. Arctic America? Methy Lake, Athabaska (Richardson).



**Pisidium punctatum punctatum** Sterki 1895, Nautilus, vol. 8, p. 99.

*References.* Lermond, 1909, p. 250; Baker, F. C., 1898, p. 404; Johnson, 1915, p. 57; Sterki, 1916, p. 451; Baker, F. C., and Cahn, A. R., 1931, p. 47.

*Type Locality.* Not located.

*Range.* Maine to Virginia and Minnesota; Hamilton Lake, Ontario.

**Pisidium punctatum simplex** Sterki 1905, Nautilus, vol. 19, p. 84.

*References.* Johnson, 1915, p. 57; Sterki, 1916, p. 451; Baker, 1928, p. 378.

*Type Locality.* "Joliet, Illinois; Carp Lake, near Mackinaw, Michigan, Fox River, Wisconsin."

*Range.* New England to Ohio, Indiana, Illinois, Wisconsin, Michigan, and Missouri.

**Pisidium pusillum** (Gmelin) Jenyns (original description not located).

*Reference.* Sterki, 1926, p. 27.

*Type Locality.* Not ascertained.

*Range.* "Probably it is also in Canada" (Sterki).

**Pisidium randolphi** Roper 1896, Nautilus, vol. 9, p. 99.

*References.* Dall, 1905a, p. 145; Sterki, 1916, p. 468.

*Type Locality.* Seattle, Washington.

*Range.* Type locality, and possibly ranging into British Columbia.

**Pisidium regulare** Prime 1852, Boston Jour. Nat. Hist., vol. 6, p. 363.

*References.* Johnson, 1915, p. 57; Sterki, 1916, p. 455.

*Type Locality.* Miami canal, Ohio.

*Range.* Ohio, Michigan, Ontario.

**Pisidium roperi** Sterki 1898, Nautilus, vol. 12, p. 77.

*References.* Johnson, 1915, p. 56; Baker, F. C., 1928, p. 399.

*Type Locality.* Not given.

*Range.* New England to Illinois, Minnesota, Ontario, Manitoba, Alberta, and Montana.

**Pisidium roseum** Scholtz (original description not located).

*References.* Sterki, 1916, p. 459; 1926, p. 27.

*Type Locality.* Not located.

*Range.* New England and eastern New York.

**Pisidium rotundatum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 164.

*References.* Taylor, G. W., and Latchford, 1890, p. 52; Dall, 1905a, p. 143; Whiteaves, 1906a, p. 30; Walker, B., 1907, p. 180; Letson, 1909, p. 244; Lermond, 1909, p. 251; Latchford, 1913, p. 20; Johnson, 1915, p. 54; Sterki, 1916, p. 465; Baker, F. C., 1928, p. 422; Russell, 1934, p. 34.

*Type Locality.* Lake Superior.

*Range.* Lake Superior region; Manitoba, Maine, St. Paul Island, Bering Sea; Niagara region; Ottawa; Hamilton and Kimmewin Lakes; Lake Nipigon; lake west of Bernard Harbour, N.W.T.; Saskatchewan, Minnesota, Montana; Europe; Cobalt, Ontario (marl); Lake St. Joseph, Ontario; Alberta, British Columbia, Yukon.

**Pisidium rubellum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 163.

*Type Locality.* Lake Superior.

*Range.* Lake Superior.

**Pisidium sibiricum** Clessin 1877, K. Svensk. Vetensk. Akad. Förh., 1877, p. 70.

*Reference.* Dall, 1905a, p. 144.

*Type Locality.* Not located.

*Range.* Siberia; doubtfully, Port Clarence, Alaska.

**Pisidium sphaericum** Sterki 1912, Nautilus, vol. 26, p. 8.

*References.* Johnson, 1915, p. 52; Sterki, 1916, p. 454; Baker, F. C., 1928, p. 429.

*Type Locality.* Not located.

*Range.* Maine to Virginia; Ontario.

**Pisidium splendidulum** Sterki 1898, Nautilus, vol. 11, p. 113.

*References.* Johnson, 1915, p. 56; Sterki, 1916, p. 461; Baker, F. C., 1928, p. 410.

*Type Locality.* Caribou, Maine.

*Range.* Maine to Virginia and Minnesota.

**Pisidium steenbuchii** Möller 1842, Index Moll. Grönl., p. 20.

*References.* Dall, 1905a, p. 143; Sterki, 1916, p. 457.

*Type Locality.* Not located.

*Range.* Greenland, Iceland, Ungava, Labrador.

**Pisidium streatori** Sterki 1901, Nautilus, vol. 14, p. 100.

*References.* Johnson, 1915, p. 59; Sterki, 1916, p. 458.

*Type Locality.* "Canaseraga River, N. Y., Garrettsville, Ohio."

*Range.* New York, Ohio, Indiana, Michigan, Ontario, Maine.

**Pisidium strengi** Sterki 1902, Nautilus, vol. 15, p. 126.

*Reference.* Sterki, 1916, p. 458.

*Type Locality.* Not located.

*Range.* Great Lakes region; Ohio, Maine, Maryland.

**Pisidium subrotundum subrotundum** Sterki 1908, Nautilus, vol. 20, p. 19.

*References.* Johnson, 1915, p. 58; Sterki, 1916, p. 459; Baker, F. C., 1928, p. 408.

*Type Locality.* Albany River, Ontario; Isle Royale, Michigan.

*Range.* New England and New York to Ohio, Indiana, Ontario, Michigan, Minnesota, Montana, and doubtfully, Oregon.

**Pisidium subrotundum canadense** Sterki, 1916 Prelim. Cat. N. A. Sphaeriidae, p. 460.

*Reference.* Latchford, 1916, p. 93.

*Type Locality.* Hare's Spring, Carleton County, Ontario.

*Range.* Known only from the type locality.

**Pisidium subtruncatum** Malm 1855, Götheborgs K. Vet. & Witt. Samh. Handl., vol. 3, p. 92.

*Reference.* Baker, F. C., 1928, p. 428.

*Type Locality.* Europe.

*Range.* Lake Nipigon, Ontario; Lake Winnebago, Wisconsin.

**Pisidium succineum** Sterki 1907, Nautilus, vol. 20, p. 99.

*References.* Johnson, 1915, p. 58; Sterki, 1916, p. 457.

*Type Locality.* Not located.

*Range.* Massachusetts, New York, Pennsylvania, to Virginia. Ontario, Ohio, Indiana, Michigan.

**Pisidium superius** Sterki 1907, Nautilus, vol. 20, p. 98.

*Reference.* Sterki, 1916, p. 457.

*Type Locality.* Not located.

*Range.* Northern Michigan; Lake Nipissing, Ontario.

**Pisidium supinum** A. Schmidt 1850, Zeitschr. für Malak., vol. 8, p. 119.

*Reference.* Sterki, 1916, p. 448.

*Type Locality.* Not located.

*Range.* Palearctic and Nearctic regions. Lake Ontario.

**Pisidium tenuissimum** Sterki 1901, Nautilus, vol. 14, p. 99.

*References.* Johnson, 1915, p. 59; Sterki, 1916, p. 463; Baker, F. C., 1928, p. 418.

*Type Locality.* "Straits and Orchard lakes, Oakland County, Michigan."

*Range.* Great Lakes region; Ohio River drainage in Ohio; Maine; Illinois.

**Pisidium trapezoideum** Sterki 1896, Nautilus, vol. 9, p. 124.

*Reference.* Johnson, 1915, p. 57.

*Type Locality.* Not located.

*Range.* Canada, Pennsylvania, New Jersey, Massachusetts.

**Pisidium ultramontanum** Prime 1865, Mon. Amer. Corbic. p. 75.

*References.* Dall, 1905a, p. 144; Sterki, 1916, p. 467.

*Type Locality.* Not located.

*Range.* California, Washington, British Columbia.

**Pisidium variabile variabile** Prime 1851, Proc. Boston, Soc. Nat. Hist., vol. 4, p. 163.

*References.* Dall, 1905a, p. 142; Johnson, 1915, p. 53; Sterki, 1916, p. 453; Baker, F. C., 1928, p. 381.

*Type Locality.* Fresh Pond, near Cambridge, Massachusetts.

*Range.* Eastern United States north of Virginia; Colorado and northward; Seattle, Washington; Manitoba; Yukon.

**Pisidium variabile brevius** Sterki 1906, Nautilus, vol. 19, p. 118.

*Reference.* Sterki, 1916, p. 453.

*Type Locality.* Not located.

*Range.* Alberta: Jasper Park; Ohio and Michigan to South Dakota and Ontario.

**Pisidium variabile magnum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 453.

*Type Locality.* None given.

*Range.* Washington, Montana.

**Pisidium ventricosum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 68.

*References.* Dall, 1905a, p. 143; Johnson, 1915, p. 54; Sterki, 1916, p. 466.

*Type Locality.* Fresh Pond, Cambridge, Massachusetts.

*Range.* Massachusetts to Great Slave Lake; New York; Michigan.

**Pisidium vesiculare** Sterki 1896, Nautilus, vol. 10, p. 21.

*References.* Johnson, 1915, p. 59; Sterki, 1916, p. 466; Baker, F. C., 1928, p. 423.

*Type Locality.* Grand Rapids, Michigan.

*Range.* Great Lakes region.

**Pisidium vexum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 461.

*Reference.* Latchford, 1916, p. 93.

*Type Locality.* Lake Gorman, Renfrew County, Ontario.

*Range.* Type locality and Lake Nipigon, Ontario. Massachusetts.

**Pisidium virginicum** Gmelin 1772, Syst. Nat., ed. 13, vol. 6, p. 3226.

*References.* Dall, 1905a, p. 141; Johnson, 1915, p. 52; Sterki, 1916, p. 446.

*Type Locality.* "In Virginiae fluviis."

*Range.* United States and Canada east of the Rockies. Yukon. Alaska.

**Pisidium walkeri** Sterki 1895, Nautilus, vol. 9, p. 75.

*References.* Johnson, 1915, p. 58; Sterki, 1916, p. 457; Baker, F. C., 1928, p. 394.

*Type Locality.* Kent County, Michigan.

*Range.* Maine to Virginia and Ontario; Missouri; South Dakota.

#### Genus *Sphaerium* Scopoli 1777

**Sphaerium acuminatum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 155.

*Reference.* Baker, F. C., 1928, p. 331.

*Type Locality.* Lake Superior.

*Range.* Great Lakes region.

**Sphaerium aureum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 159.

*References.* Dall, 1905a, p. 135; Sterki, 1916, p. 432.

*Type Locality.* Lake Superior.

*Range.* Upper Mississippi valley; Illinois, Iowa, South Dakota, Missouri, and Ohio, Arkansas, Kansas.

**Sphaerium canadense** Sterki MS. (apparently never described).

*References.* Whittaker, 1924, p. 10; Brooks and Herrington, 1944, p. 94.

*Type Locality.* None given.

*Range.* Mackenzie River Basin (Whittaker).

*Remarks.* A form of *S. striatinum* Lamarek according to Brooks and Herrington.

**Sphaerium corneum** Linné 1758, Syst. Nat., ed. 10, p. 678.

*Reference.* Germain, 1931, p. 689; Sterki, 1926, p. 29.

*Type Locality.* Europe.

*Range.* Palearctic. Lake Ontario, probably introduced (Sterki).

**Sphaerium crassum** Sterki 1901, Nautilus, vol. 14, p. 140.

*References.* Sterki, 1916, p. 432; Baker, F. C., 1928, p. 318.

*Type Locality.* Carp Lake, near Mackinaw City, Michigan.

*Range.* Northern New York, Quebec, Ontario, northern Michigan, and Wisconsin.

**Sphaerium dentatum** Haldeman 1841, Proc. Acad. Nat. Sci. Phila., vol. 1, p. 100.

*References.* Dall, 1905a, p. 137; Sterki, 1916, p. 437; Henderson, 1929, p. 62.

*Type Locality.* Willamette River, Oregon.

*Range.* California, Oregon, Washington.

**Sphaerium emarginatum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 156.

*References.* Dall, 1905a, p. 138; Johnson, 1915, p. 47; Baker, F. C., 1928, p. 328.

*Type Locality.* Region of Lake Superior.

*Range.* Lake Superior; Saskatchewan River, near Lake Winnipeg.

**Sphaerium fabale** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 159.

*References.* Dall, 1905a, p. 137; Sterki, 1916, p. 436.

*Type Locality.* Lake Superior.

*Range.* Eastern United States and northward; Battle River, Alberta.

**Sphaerium fallax** Sterki 1930, Nautilus, vol. 43, p. 93,

*Reference.* Baker, F. C., and Cahn, 1941, p. 46.

*Type Locality.* "Region of the Great Lakes, generally more northern, mostly in lakes of northern Michigan and Wisconsin (and probably in Minnesota, etc.)"

*Range.* Type locality and Lake of the Woods region, Ontario.

**Sphaerium flavum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 155.

*References.* Dall, 1905a, p. 138; Sterki, 1916, p. 436; Baker, F. C., 1928, p. 342.

*Type Locality.* Lake Superior.

*Range.* Lake Superior, Sault Ste Marie, Michigan.

**Sphaerium medium** J. C. Sowerby 1836, in Richardson, Fauna Boreali-Americana, vol. 3, p. 316.

*Reference.* Dall, 1905a, p. 140.

*Type Locality.* Methy Lake, Athabaska.

*Range.* Recorded only from the type locality.

*Remarks.* Apparently undescribed.

**Sphaerium modestum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 159.

*Reference.* Sterki, 1916, p. 436.

*Type Locality.* Pennsylvania.

*Range.* New York to Virginia and westward; Ontario; Ohio; Kentucky; Alabama.

**Sphaerium nobile** Gould 1855, Proc. Boston Soc. Nat. Hist., vol. 5, p. 229.

*References.* Dall, 1905a, p. 137; Sterki, 1916, p. 437; Henderson 1929, p. 62.

*Type Locality.* San Pedro, California.

*Range.* California, Washington, Idaho.

**Sphaerium notatum** Sterki 1927, Nautilus, vol. 41, p. 55.

*Reference.* Baker, F. C., 1928, p. 339.

*Type Locality.* Camp Creek, Dickinson County, Kansas.

*Range.* Wisconsin south to Texas, west to North Dakota, Arkansas, and Oklahoma.

**Sphaerium occidentale occidentale** Prime 1860, Proc. Acad. Nat. Sci. Phila., 1860, p. 295.

*References.* Dall, 1905a, p. 137; Johnson, 1915, p. 47; Sterki, 1916, p. 438; Baker, F. C., 1928, p. 347; Henderson, 1929, p. 62; Herrington, 1944, pp. 6-7; 1948, pp. 74-75.

*Type Locality.* Oswego and Greenwich, New York; Columbus, Ohio.

*Range.* Northern United States, Vermont to Washington and northward. Montana, Manitoba; Washington record doubtful.

**Sphaerium occidentale amphibium** Sterki 1907, Proc. Ohio Acad. Sci., 1907, p. 395.

*References.* Sterki, 1916, p. 438; Baker, F. C., 1928, p. 348.

*Type Locality.* Not given.

*Range.* Same area as *S. occidentale*, but apparently more northern in distribution.



**Sphaerium patella** Gould 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 292.

*References.* Dall, 1905a, p. 138; Sterki, 1916, p. 438; Henderson, 1929, p. 63.

*Type Locality.* Walla Walla and Vancouver, Oregon (Washington).

*Range.* Northern California to British Columbia.

**Sphaerium primeanum** Clessin 1878, Malak. Blätt., vol. 25, p. 122.

*References.* Dall, 1905a, p. 138; Sterki, 1916, p. 437; Henderson, 1929, p. 63.

*Type Locality.* Not located.

*Range.* Oregon and Washington.

**Sphaerium rhomboideum** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 380.

*References.* Dall, 1905a, p. 136; Johnson, 1915, p. 47; Sterki, 1916, p. 438; Baker, F. C., 1928, p. 345; Henderson, 1929, p. 63.

*Type Locality.* Lake Champlain.

*Range.* New England to Michigan and northwestward to British Columbia and Alaska. Ontario. Manitoba.

**Sphaerium simile** Say 1817, Nicholson's Encycl., 1st Amer. Ed., pl. 1, fig. 9.

*References.* Dall, 1905a, p. 134; Baker, F. C., 1928, p. 313; Henderson, 1929, p. 63.

*Type Locality.* Delaware River.

*Range.* East of the Mississippi. Manitoba, Ontario, and Quebec.

**Sphaerium solidulum** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 158.

*References.* Dall, 1905a, p. 136; Johnson, 1915, p. 46; Sterki, 1916, p. 433.

*Type Locality.* Ohio.

*Range.* Eastern United States from New Mexico and Louisiana to the Great Lakes and Manitoba; Alberta.

**Sphaerium spokani** Baird 1863, Proc. Zool. Soc. London, 1863, p. 69.

*References.* Dall, 1905a, p. 138; Sterki, 1916, p. 437; Henderson, 1929, p. 63.

*Type Locality.* Not located.

*Range.* Spokane and Kootenay Rivers, eastern British Columbia.

**Sphaerium stagnicola** J. C. Sowerby 1836, in Richardson, Fauna Boreali-Americana, vol. 3, p. 316.

*Reference.* Dall, 1905a, p. 140.

*Type Locality.* Methy Lake, Athabaska.

*Range.* Recorded only for the type locality.

*Remarks.* Apparently undescribed.



**Sphaerium stamineum** Conrad 1834, Amer. Jour. Sci., vol. 25, p. 342.

*References.* Dall, 1905a, p. 136; Johnson, 1915, p. 46; Sterki, 1916, p. 433; Baker, F. C., 1928, p. 325.

*Type Locality.* Southern Alabama.

*Range.* Eastern United States northward to Manitoba.

**Sphaerium striatinum** Lamarck 1818, Anim. sans Vert., vol. 5, p. 560.

*References.* Dall, 1905a, p. 135; Johnson, 1915, p. 46.

*Type Locality.* Lake George, New York.

*Range.* North America east of the Rockies.

**Sphaerium sulcatum sulcatum** Lamarck 1818, Anim. sans Vert., vol. 5, p. 560.

*References.* Dall, 1905a, p. 134 (as a synonym of *S. simile*); Johnson, 1915, p. 45; Sterki, 1916, p. 431; Henderson, 1929, p. 64.

*Type Locality.* Lake George, New York.

*Range.* Eastern Canada, but not clearly known. Washington. "East of the Rockies, rare in the south."

*Remarks.* Possibly a synonym of *S. simile* Say.

**Sphaerium sulcatum planatum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 432.

*Reference.* Baker, F. C., 1928, p. 317.

*Type Locality.* None given.

*Range.* Ohio, Indiana, Illinois, Michigan, Wisconsin, and Ontario.

**Sphaerium tenue** Prime 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 161.

*References.* Dall, 1905a, p. 139; Johnson, 1915, p. 49; Henderson, 1929, p. 64.

*Type Locality.* New Bedford, Massachusetts.

*Range.* Maine, Quebec, Ontario, Northwest Territories, Yukon, and Alaska.

**Sphaerium torsum** Sterki 1916, Prelim. Cat. N. A. Sphaeriidae, p. 434.

*Reference.* Baker, F. C., 1928, p. 330.

*Type Locality.* Ottawa River, near Ottawa, Ontario, and Hull, Quebec.

*Range.* Quebec, Ontario, Wisconsin. Fossil: Goat Island, New York.

**Sphaerium tumidum** Baird 1863, Proc. Zool. Soc. London, 1863, p. 69.

*References.* Dall, 1905a, p. 138; Sterki, 1916, p. 437; Henderson, 1929, p. 64.

*Type Locality.* Sumas Prairie, Fraser River, British Columbia.

*Range.* Known only from the type locality.

**Sphaerium vermontanum** Prime 1861, Proc. Acad. Nat. Sci. Phila., 1861, p. 128.

*References.* Johnson, 1915, p. 46; Sterki, 1916, p. 435.

*Type Locality.* Vermont.

*Range.* Lake Champlain and Lake Memphremagog, Quebec and Vermont. Maine, Quebec, Ontario.

**Sphaerium walkeri** Sterki 1901, Nautilus, vol. 14, p. 142.

*Reference.* Dall, 1905a, p. 135.

*Type Locality.* Lake Michigan, off New York Point, in 24 meters.

*Range.* Yukon; Lake Michigan.

## Class SCAPHOPODA

### Family DENTALIIDAE

#### Genus *Dentalium* Linné 1758

**Dentalium dalli** Pilsbry and Sharp 1897, Man. Conch., vol. 17, pl. 21, fig. 46.

*Reference.* Oldroyd, 1927a, p. 10.

*Type Locality.* Bering Sea.

*Range.* Bering Sea, north of Unalaska, 351 fms.; off Tillamook Bay, Oregon, 786 fms., south to Peru.

**Dentalium inversum** Deshayes 1825, Mém. Soc. Hist. Nat. Paris, vol. 2, p. 370.

*Reference.* Oldroyd, 1927a, p. 9.

*Type Locality.* Not known.

*Range.* Bering Sea to Panama in increasingly deep water.

**Dentalium pretiosum** Sowerby 1860, Thes. Conchyl., vol. 95, pl. 225, fig. 57.

*Reference.* Oldroyd, 1927a, p. 13.

*Type Locality.* California.

*Range.* Forrester Island, Alaska, to San Diego, California.

**Dentalium vallicolens** Raymond 1904, Nautilus, vol. 17, p. 123.

*Reference.* Oldroyd, 1927a, p. 13.

*Type Locality.* Station 12, submerged valley off Redondo, Santa Monica Bay, California, 145 fms.

*Range.* Straits of Juan de Fuca to Gulf of California.

#### Subgenus *Antalis* H. and A. Adams 1854

**Dentalium agile subagile** Henderson 1920, Bull. U. S. Nat. Mus., No. 111, p. 38.

*References.* Whiteaves, 1901a, p. 152; Johnson, 1915, p. 83; 1934, p. 60.

*Type Locality.* U. S. Bur. Fisheries Station 2513, between Halifax and La Have Bank, Nova Scotia, 134 fms.

*Range.* Prince Edward Island to Maine, 57 to 134 fms.

**Dentalium entale stimpsoni** Henderson 1920, Bull. U. S. Nat. Mus., No. 111, p. 35.

*References.* Whiteaves, 1901a, p. 152; Johnson, 1915, p. 82; 1934, p. 60.

*Type Locality.* Near Gotts Island, off Mount Desert, Maine, 20 fms.

*Range.* Off Nova Scotia south to off Cape Hatteras, North Carolina, 8 to 1,255 fms.

**Dentalium occidentale occidentale** Stimpson 1851, Shells of New England, p. 28.

*References.* Whiteaves, 1901a, p. 152; Johnson, 1915, p. 83; 1934, p. 60.

*Type Locality.* "Coast of Maine, and in Massachusetts Bay."

*Range.* Gulf of St. Lawrence south to off Cape Hatteras, North Carolina, 60 to 1,686 fms.

#### Family SIPHONODONTALIIDAE

#### Genus *Cadulus* Philippi 1844

**Cadulus aberrans** Whiteaves 1887, Trans. Roy. Soc. Canada, vol. 4, sec. 4, p. 123.

*Reference.* Oldroyd, 1927a, p. 17.

*Type Locality.* Quatsino Sound, British Columbia.

*Range.* Known only from the type locality.

**Cadulus californicus** Pilsbry and Sharp 1898, Man. Conch., vol. 17, p. 180.

*Reference.* Oldroyd, 1927a, p. 16.

*Type Locality.* Not located.

*Range.* Clarence Strait, Alaska, to Manta, Ecuador.

**Cadulus hepburni** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., vol. 2, p. 12.

*Reference.* Oldroyd, 1927a, p. 15.

*Type Locality.* Near Victoria, British Columbia, 60 fms.

*Range.* Victoria, British Columbia, to Monterey, California.

**Cadulus stearnsii** Pilsbry and Sharp 1898, Man. Conch., vol. 17, p. 253.

*Reference.* Oldroyd, 1927a, p. 17.

*Type Locality.* Off Tillamook Harbour, Oregon, 786 fms.

*Range.* British Columbia to Lower California.

**Cadulus tolmiei** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 13.

*Reference.* Oldroyd, 1927a, p. 16.

*Type Locality.* Near Victoria, British Columbia.

*Range.* Vancouver Island, British Columbia, to San Quentin Bay, Lower California.

Genus *Siphonodentalium* Sars 1859

**Siphonodentalium lobatum** Sowerby 1860, Thes. Conchyl., vol. 3, p. 100.

*References.* Whiteaves, 1901a, p. 153; Johnson, 1915, p. 83; 1934, p. 62.

*Type Locality.* Not located.

*Range.* Gulf of St. Lawrence to off Cape Hatteras, North Carolina, 60 to 1,813 fms.

Subgenus *Pulsellum* Stoliczka 1868

**Siphonodentalium bushi** Henderson 1920, Bull. U. S. Nat. Mus., No. 111, p. 94.

*References.* Whiteaves, 1901a, p. 153; Johnson, 1934, p. 62.

*Type Locality.* U. S. Bureau of Fisheries Station 2710, 984 fms.

*Range.* Bedford Basin, near Halifax, Nova Scotia, 35 fms., (Whiteaves); off George Bank to Cape Hatteras, North Carolina, 319 to 984 fms. (Johnson).

Class **GASTROPODA**

## MARINE SPECIES

## Subclass PROSOBRANCHIA

Order **Archaeogastropoda**Family **ACMAEIDAE**Genus *Acmaea* Eschscholtz 1830

**Acmaea mitra** Eschscholtz 1833, Zoöl. Atlas, p. 18.

*References.* Oldroyd, 1927c, p. 144; Grant and Gale, 1931, p. 810.

*Type Locality.* Bering Sea.

*Range.* Pribilof Islands, Bering Sea, to San Diego, California. Pliocene and Pleistocene of California.

**Acmaea mitra funiculata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 650.

*Reference.* Oldroyd, 1927c, p. 145.

*Type Locality.* Monterey, California.

*Range.* Shumagin Islands, Alaska, to Magdalena Bay, Lower California.

**Acmaea rubella** Fabricius 1780, Fauna Groenl., p. 386.

*References.* Hancock, 1846, p. 332; Posselt, 1898, p. 115; Whiteaves, 1901a, p. 156; Johnson, 1934, p. 65.

*Type Locality.* Probably Greenland.

*Range.* Greenland to Nova Scotia, 20 to 40 fms.

**Acmaea scutum scutum** Eschscholtz 1833, Zoöl. Atlas, pt. 5, p. 19.

*Reference.* Oldroyd, 1927c, p. 147.

*Type Locality.* ?

*Range.* Southern Bering Sea, Pribilof and Aleutian Islands, to Gulf of California.

**Acmaea scutum cribraria** Carpenter 1866, Amer. Jour. Conchol., vol. 2, p. 335.

*Reference.* Oldroyd, 1927c, p. 149.

*Type Locality.* California.

*Range.* Neah Bay, Washington, to Santa Barbara, California.

**Acmaea scutum patina** Eschscholtz 1833, Zoöl. Atlas, p. 19.

*Reference.* Oldroyd, 1927c, p. 148.

*Type Locality.* ?

*Range.* Southern Bering Sea to Tugar and the Shentar Islands on the west, Pribilof and Aleutian Islands to the Gulf of California.

**Acmaea scutum pintadina** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 151.

*Reference.* Oldroyd, 1927c, p. 149.

*Type Locality.* Straits of Juan de Fuca, Puget Sound, Washington.

*Range.* Aleutian Islands to Monterey, California.

**Acmaea testudinalis testudinalis** Müller 1776, Zoöl. Danicae Prodr., p. 237.

*References.* Whiteaves, 1901a, p. 155; Willcox, 1905, pp. 325-333; Johnson, 1915, p. 85; Nylander, 1928, pp. 38-39; Johnson, 1929, p. 103; 1934, p. 64.

*Type Locality.* "Daniae et Norvegiae".

*Range.* Labrador to Connecticut.

**Acmaea testudinalis alveus** Conrad 1831, Jour. Acad. Nat. Sci. Phila., vol. 6, p. 267.

*References.* Johnson, 1915, p. 85; 1934, p. 64.

*Type Locality.* Massachusetts.

*Range.* On eelgrass, Maine to Massachusetts.

#### Section *Collisella* Dall 1871

**Acmaea apicina** Dall 1879, Proc. U. S. Nat. Mus., vol. 1, p. 341.

*Reference.* Oldroyd, 1927c, p. 150.

*Type Locality.* Pribilof Islands.

*Range.* Pribilof, Aleutian, and Shumagin Islands, Alaska.

*Remarks.* Possible for northwestern Canadian waters.

**Acmaea asmi** Middendorff 1849, Beitr. Malac. Ross., vol. 2, p. 39.

*References.* Oldroyd, 1927c, p. 157; Grant and Gale, 1931, p. 812.

*Type Locality.* Sitka, Alaska.

*Range.* Sitka, Alaska, to San Diego, California, and Socorro Island, Lower California. Pleistocene of California.

**Acmaea cassis** Eschscholtz 1833, Zoöl. Atlas, p. 19.

*Reference.* Oldroyd, 1927c, p. 145.

*Type Locality.* ?

*Range.* Aleutian Islands to San Francisco, California.

**Acmaea cassis nacelloides** Dall 1871, Amer. Jour. Conch., vol. 6, p. 247.

*Reference.* Oldroyd, 1927c, p. 147.

*Type Locality.* California.

*Range.* Attu Island, Aleutians, to San Diego, California.

**Acmaea cassis olympica** Dall 1914, Nautilus, vol. 28, p. 14.

*Reference.* Oldroyd, 1927c, p. 147.

*Type Locality.* Olympia, Washington.

*Range.* Alaska peninsula to San Diego, California.

**Acmaea cassis pelta** Eschscholtz 1833, Zoöl. Atlas, p. 19.

*References.* Oldroyd, 1927c, p. 147; Grant and Gale, 1931, p. 810.

*Type Locality.* Sitka, Alaska.

*Range.* Okhotsk and southern Bering Sea, Nushagak, Alaska, Aleutian Islands to Lower California. Pleistocene of California.

**Acmaea digitalis** Eschscholtz 1833, Zoöl. Atlas, vol. 5, p. 20.

*Reference.* Oldroyd, 1927c, p. 151.

*Type Locality.* ?

*Range.* Aleutian Islands to Monterey, California.

**Acmaea digitalis umbonata** Reeve 1855, Conchol. Iconica, vol. 8 fig. 107.

*Reference.* Oldroyd, 1927c, p. 152.

*Type Locality.* Upper California.

*Range.* Saginaw Bay, Alaska, to California.

**Acmaea instabilis** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 150.

*References.* Oldroyd, 1927c, p. 156; Grant and Gale, 1931, p. 813.

*Type Locality.* Neah Bay, Washington.

*Range.* Kodiak Island to San Diego, California.

**Acmaea peramabilis** Dall 1872, Proc. Calif. Acad. Sci., vol. 4, p. 302.

*References.* Oldroyd, 1927c, p. 150.

*Type Locality.* Shumagin group of islands, Alaska.

*Range.* Known only from the type locality.

*Remarks.* Possible for northern British Columbia.

**Acmaea persona** Eschscholtz 1833, Zoöl. Atlas, vol. 5, p. 20.

*References.* Oldroyd, 1927c, p. 154; Grant and Gale, 1931, p. 811.

*Type Locality.* ?

*Range.* Shumagin Islands, Alaska, to Socorro Island. Pleistocene of California.

**Acmaea rosacea** Carpenter 1866, Amer. Jour. Conch., vol. 2, p. 341.

*Reference.* Oldroyd, 1927c, p. 154.

*Type Locality.* San Diego, California.

*Range.* Neah Bay, Washington, to Acapulco, Mexico.

**Acmaea persona strigillata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 618.

*Reference.* Oldroyd, 1927c, p. 155.

*Type Locality.* ?

*Range.* Sitka, Alaska, to Magdalena Bay, Lower California.

**Acmaea sybaritica** Dall 1871, Amer. Jour. Conch., vol. 6. p. 257.

*Reference.* Oldroyd, 1927c, p. 154.

*Type Locality.* Bering Sea.

*Range.* Plover Bay, Eastern Siberia, to Japan, Pribilof, and Aleutian Islands, and Chirikoff Island.

**Acmaea triangularis** Carpenter 1866, Proc. Calif. Acad. Sci., vol. 3, p. 213.

*Reference.* Oldroyd, 1927c, p. 158.

*Type Locality.* Monterey, California.

*Range.* Sitka, Alaska, to Gulf of California.

#### Section *Rhodopetala* Dall 1920

**Acmaea rosea** Dall 1872, Proc. Calif. Acad. Sci., vol. 4, p. 270.

*Reference.* Oldroyd, 1927c, p. 158.

*Type Locality.* Alaska.

*Range.* Kyska Island, Aleutians, to Shumagin Islands, Alaska, to California.

#### Family LEPETIDAE

##### Genus *Lepeta* Gray 1847

**Lepeta caeca** Müller 1776, Zoöl. Danicae Prodr., p. 237.

*References.* Whiteaves, 1901a, p. 155; Johnson, 1915, p. 86; 1934, p. 65.

*Type Locality.* "Daniae et Norvegiae".

*Range.* Greenland to Massachusetts, 2 to 300 fms.

##### Subgenus *Cryptoctenidia* Dall 1918

**Lepeta alba alba** Dall 1869, Amer. Jour. Conch., vol. 5, p. 145.

*Reference.* Oldroyd, 1927c, p. 143.

*Type Locality.* Seniavine Strait.

*Range.* Bering Strait and Sea, south to straits of Juan de Fuca.

**Lepeta alba instabilis** Dall 1869, Amer. Jour. Conch., vol. 5, p. 145.

*Reference.* Oldroyd, 1927c, p. 143.

*Type Locality.* Sitka, Alaska.

*Range.* Unalaska to the Shumagins and south to Sitka Sound, Alaska.

**Lepeta caecoides** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 60.

*Reference.* Oldroyd, 1927c, p. 143.

*Type Locality.* Puget Sound.

*Range.* Arctic and Bering Seas to Japan, the Aleutian Islands, south to the Farallon Islands, California.



**Lepeta concentrica** Middendorff 1851, *Sibirische Reise*, p. 183.

*References.* Oldroyd, 1927c, p. 183; Grant and Gale, 1931, p. 809.

*Type Locality.* Okhotsk Sea.

*Range.* Icy Cape, Arctic Ocean, Okhotsk Sea, Shantar Islands, Forrester Island, Alaska, to Puget Sound, Washington. Pliocene or Pleistocene of Oregon.

#### Family COCCULINIDAE

##### Genus *Cocculina* Dall 1882

**Cocculina agassizii** Dall 1908, *Bull. Mus. Comp. Zool.*, vol. 43, p. 340.

*Reference.* Oldroyd, 1927c, p. 160.

*Type Locality.* Albatross Station 4630, Gulf of Panama, 556 fms.

*Range.* Off Queen Charlotte Islands, British Columbia, in 150 fms., to Gulf of Panama.

**Cocculina cazanica** Dall 1919, *Proc. U. S. Nat. Mus.*, vol. 56, p. 356.

*Reference.* Oldroyd, 1927c, p. 160.

*Type Locality.* U. S. Fish Comm. Station 4245, in Kasa-an Bay, Alaska.

*Range.* Kasa-an Bay and Stephens Passage, Alaska, 95 to 160 fms. Possible for northern British Columbia.

**Cocculina conica** Verrill 1884, *Trans. Conn. Acad.*, vol. 6, p. 204.

*Reference.* Johnson, 1934, p. 66.

*Type Locality.* Station 2078, in 499 fathoms, N. lat.  $41^{\circ} 12' 50''$ , W. long.  $66^{\circ} 12' 20''$ .

*Range.* Off Nova Scotia, 499 fms.

#### Family FISSURELLIDAE

##### Genus *Diodora* Gray 1821

**Diodora aspera** Eschscholtz 1833, *Zoöl. Atlas*, vol. 5, p. 21.

*References.* Oldroyd, 1927c, p. 237; Grant and Gale, 1931, p. 850.

*Type Locality.* Sitka, Alaska.

*Range.* Cook's Inlet, Alaska, to Magdalena Bay, Lower California. Pleistocene of California.

##### Genus *Hemitoma* Swainson 1840

**Hemitoma yatesii** Dall 1901, *Nautilus*, vol. 14, p. 125.

*Reference.* Oldroyd, 1927c, p. 239.

*Type Locality.* Monterey Bay, California.

*Range.* Forrester Island, Alaska, to Monterey, California.

Genus *Megatebennus* Pilsbry 1890

**Megatebennus bimaculatus** Dall 1871, Amer. Jour. Conch., vol. 7, p. 132.

*References.* Bradshaw, 1895, pp. 112-113; Oldroyd, 1927c, p. 243; Grant and Gale, 1931, p. 849.

*Type Locality.* Monterey, California.

*Range.* Forrester Island, Alaska, to Cape San Lucas. Pleistocene of California.

Genus *Puncturella* Lowe 1827

**Puncturella brychia** Watson 1883, Jour. Linn. Soc. London, vol. 17, p. 32.

*Reference.* Johnson, 1934, p. 67.

*Type Locality.* Off Halifax, Nova Scotia, 1,340 fms.

*Range.* Known only from the type locality.

**Puncturella cooperi** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 651.

*Reference.* Oldroyd, 1927c, p. 240.

*Type Locality.* Catalina Island, California.

*Range.* Kasa-an Bay, Alaska, to Santa Rosa Island and San Pedro, California.

**Puncturella cucullata** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 159.

*References.* Oldroyd, 1927c, p. 241; Grant and Gale, 1931, p. 851.

*Type Locality.* Puget Sound.

*Range.* Kodiak Island, Alaska, to La Paz, Lower California. Pliocene and Pleistocene of California.

**Puncturella eyerdami** Dall 1924, Nautilus, vol. 37, p. 133.

*Reference.* Eyerdam, 1924, pp. 23, 27.

*Type Locality.* Drier Bay, off Knight Island, Prince William Sound, Alaska.

*Range.* Known only from the type locality.

**Puncturella galeata** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 159.

*References.* Oldroyd, 1927c, p. 240; Grant and Gale, 1931, p. 851.

*Type Locality.* Puget Sound.

*Range.* Unalaska, Aleutian Islands, south to Santa Rosa Island, California. Pleistocene of California.

**Puncturella longifissa** Dall 1914, Nautilus, vol. 28, p. 63.

*Reference.* Oldroyd, 1927c, p. 242.

*Type Locality.* Bering Island, Bering Sea.

*Range.* Known only from the type locality.

**Puncturella major** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 189.

*Reference.* Oldroyd, 1927c, p. 242.

*Type Locality.* Albatross Station 3262, off coast of Akutan Island, Bering Sea, 43 fms.

*Range.* Pribilof Islands, Bering Sea, to Dixon Entrance, Alaska.

**Puncturella multistriata** Dall 1914, Nautilus, vol. 28, p. 63.

*Reference.* Oldroyd, 1927c, p. 241.

*Type Locality.* Puget Sound.

*Range.* Atka Island, Aleutians, to San Diego; Cortez Banks, Chile.

**Puncturella princeps** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 42.

*References.* Whiteaves, 1901a, p. 156; Johnson, 1915, p. 86; 1934, p. 67.

*Type Locality.* Stomach of haddock, 75 to 100 miles off mouth of Kennebec River, 40 to 75 fms.

*Range.* Labrador, and in deep water to North Carolina, 25 to 310 fms.

*Synonym.* *P. noachina* auctt.

#### Family SCISSURELLIDAE

##### Genus *Scissurella* d'Orbigny 1823

**Scissurella chiricova** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 370.

*Reference.* Oldroyd, 1927c, p. 228.

*Type Locality.* U. S. Fish Comm. Station 3340, southeast of Chirikoff Island, Alaska, 695 fms.

*Range.* Known only from the type locality.

**Scissurella crispata** Fleming 1832, Mem. Wern. Nat. Hist. Soc., vol. 6, p. 385.

*References.* Whiteaves, 1901a, p. 157; Johnson, 1915, p. 87; 1934, p. 68.

*Type Locality.* Isle of Noss, Zetland.

*Range.* Greenland to New Hampshire, 4 to 790 fms.

**Scissurella kelseyi** Dall 1905, Nautilus, vol. 18, p. 124.

*Reference.* Oldroyd, 1927c, p. 228.

*Type Locality.* U. S. Fish Comm. Station 4353, off San Diego, California.

*Range.* Queen Charlotte Islands, British Columbia, to South Coronado Island.

#### Family HALIOTIDAE

##### Genus *Haliotis* Linné 1758

**Haliotis kamtschatkana** Jonas 1845, Zeitschr. für Malak., 1845, p. 168.

*Reference.* Oldroyd, 1927c, p. 234.

*Type Locality.* Unalaska Island, Kamchatka Sea.

*Range.* Kamchatka Sea, Sitka, Alaska, to Redondo, California. Japan.

Family TROCHIDAE

Genus *Calliostoma* Swainson 1840

***Calliostoma annulatum*** Martyn 1784, Univ. Conchol., table 1, pl. 32.

*References.* Oldroyd, 1927c, p. 184; Grant and Gale, 1931, p. 832; Rehder, 1937, p. 116.

*Type Locality.* California.

*Range.* Forrester Island, Alaska, to Catalina Island, California. Pliocene and Pleistocene of California.

***Calliostoma canaliculatum*** Martyn 1784, Figs. of Nondescri. Shells, table 1, pl. 32.

*References.* Oldroyd, 1927c, p. 184; Grant and Gale, 1931, p. 833; Rehder, 1937, p. 116.

*Type Locality.* California.

*Range.* Sitka, Alaska, to San Diego, California. Pliocene and Pleistocene of California.

***Calliostoma canaliculatum transliratum*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 360.

*Reference.* Oldroyd, 1927c, p. 185.

*Type Locality.* Biorka Island, Sitka, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

***Calliostoma costatum*** Martyn 1784, Univ. Conchol., table 1, pl. 34.

*References.* Oldroyd, 1927c, p. 183; Grant and Gale, 1931, p. 833.

*Type Locality.* "King George's Sound" (Martyn).

*Range.* Sitka, Alaska, to San Diego, California. Pliocene and Pleistocene of California.

***Calliostoma costatum caeruleum*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 359.

*Reference.* Oldroyd, 1927c, p. 183.

*Type Locality.* Monterey, California.

*Range.* Neah Bay, Washington, to Monterey, California.

***Calliostoma costatum pictum*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 359.

*Reference.* Oldroyd, 1927c, p. 184.

*Type Locality.* Neah Bay, Washington.

*Range.* Neah Bay, Washington, to Monterey, California.

***Calliostoma occidentale*** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 47.

*Reference.* Whiteaves, 1901a, p. 160; Johnson, 1934, p. 70.

*Type Locality.* Casco Bay, Maine.

*Range.* Nova Scotia to south of Martha's Vineyard, Massachusetts, 25 to 980 fms.

**Calliostoma variegatum** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 61.

*Reference.* Oldroyd, 1927c, p. 185.

*Type Locality.* Puget Sound, Washington.

*Range.* Puget Sound to Cerros Island, California.

Genus *Cidarina* Dall 1902

**Cidarina cidaris** A. Adams 1864, Ann. Mag. Nat. Hist., (3) vol. 14, p. 426.

*References.* Oldroyd, 1927c, p. 193; Grant and Gale, 1931, p. 838.

*Type Locality.* Vicinity of Neah Bay, Washington.

*Range.* Kasa-an Bay, Alaska, to Cape San Quentin, Lower California. Pliocene? of Lower California; Pleistocene of California.

Section *Solaricida* Dall 1902

**Cidarina carlotta** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 553.

*Reference.* Oldroyd, 1927c, p. 193.

*Type Locality.* Albatross Station 3342, off the Queen Charlotte Islands, 1,588 fms., ooze.

*Range.* Known only from the type locality.

Genus *Halistylus* Dall 1889

**Halistylus pupoideus** Carpenter, 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 656.

*References.* Oldroyd, 1927c, p. 173; Grant and Gale, 1931, p. 825.

*Type Locality.* Monterey, California.

*Range.* Forrester Island, Alaska, to Panama Bay. Pleistocene of California.

Genus *Margarites* Leach 1847

**Margarites acuminatus** Sowerby 1838, Mal. and Conch. Mag. vol. 1, p. 26.

*References.* Whiteaves, 1901a, p. 158; Johnson, 1915, p. 88; 1934, p. 72.

*Type Locality.* Arctic Ocean.

*Range.* Arctic Ocean.

**Margarites albolineatus** E. A. Smith, 1899, Proc. Malac. Soc. London, vol. 3, p. 206.

*Reference.* Oldroyd, 1927c, p. 212.

*Type Locality.* Bering Sea.

*Range.* All coasts of Bering Sea.

**Margarites beringensis** E. A. Smith 1899, Proc. Malac. Soc. London, vol. 3, p. 206.

*Reference.* Oldroyd, 1927c, p. 211.

*Type Locality.* Arctic.

*Range.* Arctic Ocean, Plover Bay, Commander Islands and Petrel Bank, Bering Sea.

**Margarites frigidus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 357.

*Reference.* Oldroyd, 1927c, p. 213.

*Type Locality.* Arctic Ocean north of Bering Straits.

*Range.* Arctic Ocean south to Nunivak Island, Bering Sea, and Windfall Harbour, Admiralty Island, Alaska.

**Margarites funiculatus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 653.

*Reference.* Oldroyd, 1927c, p. 213.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

**Margarites groenlandicus** Gmelin 1790, Syst. Nat., vol. 1, pt. 6, p. 3574.

*References.* Whiteaves, 1901a, p. 159; Johnson 1915, p. 88; 1934, p. 72.

*Type Locality.* Shores of Greenland.

*Range.* Greenland to Massachusetts Bay, 7 to 50 fms.

*Synonym.* *M. undulata* Sowerby.

**Margarites grosvenori** Dall 1926, Proc. Biol. Soc. Wash., vol. 39, p. 59.

*Reference.* Johnson, 1934, p. 72.

*Type Locality.* Etah, Greenland, 30 fms.

*Range.* Known only from the type locality.

**Margarites helycinus** Phipps 1774, Voy. to the North Pole, App., p. 198.

*References.* Whiteaves, 1901a, p. 157; Johnson, 1915, p. 87; Oldroyd, 1927c, p. 210; Johnson, 1934, p. 72.

*Type Locality.* North side of Spitsbergen.

*Range.* Bering Strait, all coasts of Bering Sea, to Catalina Island, California. Greenland to Massachusetts Bay, 2 to 100 fms.

**Margarites helycinus elevatus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 366.

*Reference.* Oldroyd, 1927c, p. 211.

*Type Locality.* Bear Bay, Baranoff Island, Alaska.

*Range.* Known only from the type locality.

**Margarites helycinus excavatus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 366.

*Reference.* Oldroyd, 1927c, p. 210.

*Type Locality.* Constantine Harbour, Amchitka, Aleutians.

*Range.* Amchitka and Middleton Islands, Alaska.

**Margarites hypolispus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 367.

*Reference.* Oldroyd, 1927c, p. 213.

*Type Locality.* Arctic Ocean north of Bering Strait.

*Range.* Arctic Ocean north of Bering Strait.

**Margarites marginatus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 367.

*Reference.* Oldroyd, 1927c, p. 213.

*Type Locality.* Adakh Island, Aleutians.

*Range.* Arctic Ocean and Bering Sea, south to Oregon. Atlantic.

**Margarites mighelsi** Rehder 1937, Proc. Biol. Soc. Wash., vol. 50, p. 115.

*References.* Dall, 1921b, p. 49; Johnson, 1934, p. 72.

*Type Locality.* Gulf of St. Lawrence.

*Range.* Hudson Bay to Gulf of Maine.

*Synonym.* *M. johnsoni* Dall 1921, non Arnold.

**Margarites olivaceus** Brown 1827, Ill. Conch. G. B. and Ireland, pl. 46, figs. 30, 31.

*References.* Hancock, 1846, p. 325 (original description of *M. harrisoni*); Whiteaves, 1901a, p. 158; Johnson, 1915, p. 88; Oldroyd, 1927c, p. 214; Johnson, 1934, p. 72.

*Type Locality.* Greenock, Scotland.

*Range.* St. Lawrence Island; Atka Island, Aleutians. Labrador.

*Synonyms.* *M. argentata* Gould 1841; *M. harrisoni* Hancock 1846.

**Margarites parcipictus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 653.

*Reference.* Oldroyd, 1927c, p. 199.

*Type Locality.* Neah Bay, Washington.

*Range.* Sitka, Alaska, to San Diego, California.

**Margarites pribiloffensis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 366.

*Reference.* Oldroyd, 1927c, p. 212.

*Type Locality.* U. S. Fish Comm. Station 3504, near Pribilof Islands, 34 fms.

*Range.* Arctic Ocean to off Pribiloff Islands, Bering Sea.

**Margarites umbilicalis** Broderip and Sowerby 1829, Malac. and Conchol. Mag., vol. 1, p. 26.

*References.* Hancock, 1846, p. 324; Whiteaves, 1901a, p. 158; Oldroyd, 1927c, p. 214; Johnson, 1934, p. 72.

*Type Locality.* Arctic Ocean.

*Range.* Arctic Coast. Circumboreal. Greenland and Labrador, 5 to 160 fms.

**Margarites umbilicalis spiralis** Baker 1919, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 504.

*Reference.* Johnson, 1934, p. 72.

*Type Locality.* Etah, Greenland, 2 to 10 fms.

*Range.* Known only from the type locality.



**Margarites vahlii** Möller 1842, Index Moll. Groenl., p. 8.

*References.* Posselt, 1898, p. 124; Johnson, 1934, p. 72.

*Type Locality.* Greenland.

*Range.* West Greenland, 2 to 300 fms.

**Margarites (vahlii var.?) tenuisculptus** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 61.

*Reference.* Oldroyd, 1927c, p. 214.

*Type Locality.* Neah Bay, Washington.

*Range.* Neah Bay and Puget Sound. Plover Bay (Krause?).

Subgenus *Lirularia* Dall 1909

**Margarites althorpensis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 365.

*Reference.* Oldroyd, 1927c, p. 209.

*Type Locality.* Granite Cove, Port Althorp, Alaska, 14 fms.

*Range.* Known only from the type locality.

**Margarites inflatulus** Dall 1921, U. S. Nat. Mus. Bull. 112, p. 179.

*Reference.* Carpenter, 1864, p. 653; Oldroyd, 1927c, p. 207.

*Type Locality.* ?

*Range.* Vancouver Island, British Columbia, to Puget Sound.

**Margarites lacunatus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 653.

*Reference.* Oldroyd, 1927c, p. 206.

*Type Locality.* Neah Bay, Washington.

*Range.* Neah Bay, Washington, to San Diego, California. Possible for southern British Columbia waters.

**Margarites lirulatus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 653.

*References.* Oldroyd, 1927c, p. 207; Grant and Gale, 1931, p. 841.

*Type Locality.* Puget Sound.

*Range.* Port Etches, Alaska, to San Diego, California. Pliocene and Pleistocene of California.

**Margarites lirulatus obsoletus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 653.

*Reference.* Oldroyd, 1927c, p. 208.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality. Possible for southern British Columbia waters.

**Margarites lirulatus subelevatus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 653.

*Reference.* Oldroyd, 1927c, p. 208.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality. Possible for southern British Columbia waters.

**Margarites succinctus** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 653.

*Reference.* Oldroyd, 1927c, p. 205.

*Type Locality.* Neah Bay, Washington.

*Range.* Sitka, Alaska, to San Diego, California.

#### Subgenus *Pupillaria* Dall 1909

**Margarites costalis** "Lovén" Gould 1841, Rept. Invert. Mass., ed. 1, p. 252.

*References.* Whiteaves, 1901a, p. 159; Johnson, 1915, p. 88; Oldroyd, 1927c, p. 201; Grant and Gale, 1931, p. 840; Johnson, 1934, p. 73 (*M. cinerea*); Rehder, 1937, p. 115.

*Type Locality.* Massachusetts Bay.

*Range.* Greenland to Massachusetts Bay, 5 to 200 fms. Circumboreal. Bering Strait to Port Etches, Alaska. Miocene of Alaska.

*Synonym.* *M. cinerea* Couthouy 1838, *non* Born.

**Margarites costalis grandis** Mörch 1877, *in* Rink's Danish Greenland, p. 439.

*References.* Posselt, 1898, p. 131; Johnson, 1934, p. 73.

*Type Locality.* Greenland.

*Range.* Circumpolar; Greenland, Labrador, and Gulf of St. Lawrence, 75 fms.

**Margarites healyi** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 363.

*Reference.* Oldroyd, 1927c, p. 204.

*Type Locality.* USS "Corwin" Station 10, Arctic Ocean north of Bering Strait.

*Range.* Arctic Ocean north of Bering Strait.

**Margarites pupillus** Gould 1849, Proc. Boston Soc. Nat. Hist., vol. 3, p. 91.

*References.* Oldroyd, 1927c, p. 200; Grant and Gale, 1931, p. 840.

*Type Locality.* New Zealand (probably imported in ballast).

*Range.* Nunivak Island, Bering Sea, to San Pedro, California; ?San Diego, California, in deep water. Pliocene and Pleistocene of California.

**Margarites rhodius** Dall 1920, Proc. Acad. Nat. Sci. Phila., 1920, p. 62.

*Reference.* Oldroyd, 1927c, p. 204.

*Type Locality.* Puget Sound.

*Range.* Port Althorp, Alaska, to San Diego, California.

**Margarites rudis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 364.

*Reference.* Oldroyd, 1927c, p. 204.

*Type Locality.* Coal Harbour, Shumagins, Alaska, 8 fms.

*Range.* Bering Sea to Cook's Inlet, Alaska. Kamchatka.

**Margarites vorticiferus** Dall 1873, Proc. Calif. Acad. Sci., vol. 5, p. 59.

*Reference.* Oldroyd, 1927c, p. 201.

*Type Locality.* Iliuliuk Harbour; Captain's Bay, Unalaska, Alaska.

*Range.* Bering Strait and Sea, south and east to Unalaska, Alaska.

**Margarites vorticiferus ecarinatus** Dall 1919, Rept. Can. Arctic Exped., vol. 8, Pt. A., p. 22A.

*Reference.* Oldroyd, 1927c, p. 202.

*Type Locality.* Station 22, N. lat.  $69^{\circ} 35'$ , W. long.  $163^{\circ} 27'$ , 11 to 12 fms.

*Range.* Southwest of Point Barrow, Arctic Ocean, and south and east to the Aleutians.

**Margarites vorticiferus sharpii** Pilsbry 1898, Proc. Acad. Nat. Sci. Phila., 1898, p. 486.

*Reference.* Oldroyd, 1927c, p. 202.

*Type Locality.* Dutch Harbour, Unalaska.

*Range.* Unalaska to Port Althorp, Alaska.

#### Genus *Margaritopsis* Thiele 1906

**Margaritopsis frielei** Krause 1886, Archiv für Naturgeschichte, vol. 51, p. 263.

*Reference.* Oldroyd, 1927c, p. 215.

*Type Locality.* St. Lawrence Bay.

*Range.* Bering Strait region. Possible for Arctic Canada.

#### Genus *Solariella* S. Wood 1842

**Solariella peramabilis** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 653.

*References.* Oldroyd, 1927c, p. 195; Grant and Gale, 1931, p. 839.

*Type Locality.* California.

*Range.* Forrester Island, Alaska, to San Diego and the Coronado Islands. Japan. Pliocene and Pleistocene of California.

#### Subgenus *Machaeroplax* Friele 1877

**Solariella laevis** Friele 1886, Norske Nordhavs-Exped., 1876-78, vol. 3, Moll. II, p. 30.

*Reference.* Johnson, 1934, p. 71.

*Type Locality.* Arctic.

*Range.* Etah, Greenland, 40 fms. East of Greenland, 300 to 350 fms.

**Solariella obscura obscura** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 100.

*References.* Verrill, 1873, p. 661; Whiteaves, 1901a, p. 159; Johnson, 1915, p. 89; Oldroyd, 1927c, p. 198; Johnson, 1934, p. 71.

*Type Locality.* Massachusetts Bay.

*Range.* Arctic Ocean to Straits of Juan de Fuca. Circumboreal. Labrador to Martha's Vineyard, Massachusetts, 6 to 35 fms.

**Solariella obscura bella** Verkrüzen 1875, Jahrb. Deutsch. Malak. Gesells., 1875, p. 236.

*References.* Verrill, 1882b, p. 531; Whiteaves, 1901a, p. 160; Johnson, 1915, p. 89; 1934, p. 71.

*Type Locality.* Hammerfest.

*Range.* Annapolis Basin, Nova Scotia, to Georges Bank, 10 to 86 fms.

**Solariella obscura carinata** Verrill 1882, Catalogue Marine Moll. N. Engl., p. 532.

*Reference.* Johnson, 1934, p. 71.

*Type Locality.* Off Martha's Vineyard, 146 to 335 fms.

*Range.* Known only from the type locality.

**Solariella paupercula** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 363.

*Reference.* Oldroyd, 1927c, p. 198.

*Type Locality.* Arctic Ocean, north of Bering Straits.

*Range.* Arctic Ocean to the Aleutian Islands.

**Solariella varicosa** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 46.

*References.* Whiteaves, 1901a, p. 160; Oldroyd, 1927c, p. 197; Johnson, 1934, p. 71.

*Type Locality.* Chaleur Bay, Gaspé Peninsula, Quebec.

*Range.* Arctic Ocean to San Diego, California; Labrador to Nova Scotia, 7 to 60 fms.

#### Genus *Tegula* Lesson 1832

##### Subgenus *Chlorostoma* Swainson 1840

**Tegula funebris funebris** A. Adams 1854, Proc. Zoöl. Soc. London, 1854, p. 316.

*References.* Oldroyd, 1927c, p. 173; Grant and Gale, 1931, p. 826.

*Type Locality.* California.

*Range.* Vancouver Island, British Columbia, to Cedros Island, Lower California. Pliocene and Pleistocene of California.

**Tegula funebris subaperta** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 652.

*References.* Oldroyd, 1927c, p. 174; Grant and Gale, 1931, p. 827.

*Type Locality.* Vancouver Island?

*Range.* Neah Bay, Washington to San Diego. Pleistocene of California.

##### Subgenus *Promartynia* Dall 1909

**Tegula pulligo pulligo** Martyn 1784, Univ. Conch., table 2, pl. 76.

*Reference.* Oldroyd, 1927c, p. 179.

*Type Locality.* ?

*Range.* Sitka, Alaska, to Santa Barbara Islands, California. Pleistocene of California.

**Tegula pulligo taylori** I. Oldroyd 1922, Marine Shells Puget Sound and Vicinity, p. 171.

*Reference.* Oldroyd, 1927c, p. 179.

*Type Locality.* Hope Island, at the north end of Vancouver Island.

*Range.* Known only from the type locality.

Family SEGUENZIIDAE

Genus *Seguenzia* Jeffreys 1876

**Seguenzia monocingulata** Seguenza 1876, Bolletino del R. Comitato Geologico d'Italia, vol. 7, p. 188.

*References.* Verrill, 1884, p. 186; Johnson, 1934, p. 74.

*Type Locality.* Southern Italy, Pliocene.

*Range.* Gulf of Maine to the Gulf of Mexico, 100 to 2,033 fms. Pliocene of Italy.

*Synonym.* *S. formosa* Jeffreys.

Family CYCLOSTREMATIDAE

Genus *Cyclostrema* Marryatt 1818

**Cyclostrema fulgidum** Jeffreys 1883, Proc. Zoöl. Soc. London, 1883, p. 95.

*Reference.* Johnson, 1934, p. 74.

*Type Locality.* "Porcupine" Exped., 1870, Atl. Sta. 9.

*Range.* Off Gulf of Maine to Georgia, 487 to 858 fms.

Genus *Cyclostremella* Bush 1897

**Cyclostremella concordia** Bartsch 1920, Jour. Wash. Acad. Sci., vol. 10, p. 572.

*Reference.* Oldroyd, 1927c, p. 224.

*Type Locality.* Olga, Orcus Island, Washington.

*Range.* Known only from the type locality.

Genus *Vitrinella* C. B. Adams 1850

**Vitrinella alaskensis** Bartsch 1907, Proc. U. S. Nat. Mus., vol. 32, p. 168.

*Reference.* Oldroyd, 1927c, p. 217.

*Type Locality.* Unalaska, Alaska.

*Range.* Known only from the type locality.

Subgenus *Docomphala* Bartsch 1907

**Vitrinella columbiana** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 39.

*Reference.* Oldroyd, 1927c, p. 219.

*Type Locality.* Departure Bay, British Columbia.

*Range.* Known only from the type locality.

Genus *Leptogyra* Bush 1897

**Leptogyra alaskana** Bartsch 1910, Nautilus vol. 23, p. 136.

*Reference.* Oldroyd, 1927c, p. 226.

*Type Locality.* Port Graham, Cook's Inlet, Alaska.

*Range.* Known only from the type locality.

## Family LIOTIIDAE

Genus *Mölleria* Jeffreys 1865

**Mölleria costulata** Möller 1842, Kroyer's Naturhist. Tidskr., vol. 4, p. 81.

*References.* Whiteaves, 1901a, p. 157; Johnson, 1915, p. 87; 1934, p. 78.

*Type Locality.* Greenland.

*Range.* Greenland to New England, 4 to 30 fms. Off Fernandina, Florida, 294 fms.

**Mölleria drusiana** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 358.

*Reference.* Oldroyd, 1927c, p. 172.

*Type Locality.* Constantine Harbour, Amchitka Island, Aleutians.

*Range.* Amchitka Island to Glacier Bay, Alaska.

**Mölleria quadrae** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 14.

*Reference.* Oldroyd, 1927c, p. 171.

*Type Locality.* Cumsheewa Inlet, British Columbia.

*Range.* Amchitka Island, Aleutians, to Queen Charlotte Islands, British Columbia.

## Family PHASIANELLIDAE

Genus *Phasianella* Lamarck 1804Subgenus *Eulithidium* Pilsbry 1898

**Phasianella lurida** Dall 1897, Bull. Nat. Hist. Soc. Brit. Col., No. 2, p. 15.

*Reference.* Oldroyd, 1927c, p. 163.

*Type Locality.* Skidegate Channel, Queen Charlotte Islands, British Columbia, 20 fms.

*Range.* Queen Charlotte Islands, British Columbia, to Mendocino County, California.

## Family TURBINIDAE

Genus *Astraea* Bolten 1798Subgenus *Pachypoma* Gray 1850

**Astraea inaequalis** Martyn 1784, Figs. of Nondescript Shells, Univ. Conchol., tablet 1, pl. 31.

*References.* Oldroyd, 1927c, p. 164; Grant and Gale, 1931, p. 820.

*Type Locality.* ?

*Range.* Vancouver Island, British Columbia, to the Santa Barbara Islands, California. Pliocene of Oregon, Pliocene of California, Pliocene and Pleistocene of Oregon, Pleistocene of California.

Genus *Homalopoma* Carpenter 1864

**Homalopoma bacula** Carpenter 1864, Proc. Calif. Acad. Sci., vol. 3, p. 177.

*References.* Oldroyd, 1927c, p. 167; Grant and Gale, 1931, p. 822.

*Type Locality.* Catalina Island, California.

*Range.* Puget Sound to San Martin Island, Lower California. Pliocene and Pleistocene of California.

**Homalopoma carpenteri** Pilsbry 1888, Man. Conch., vol. 10, p. 247.

*References.* Oldroyd, 1927c, p. 167; Grant and Gale, 1931, p. 821.

*Type Locality.* California.

*Range.* Sitka, Alaska, to San Diego, California, and to Cape San Lucas, Lower California. Pliocene and Pleistocene of California.

**Homalopoma engbergi** Willett 1929, Nautilus, vol. 43, p. 27.

*Type Locality.* Olga, Washington.

*Range.* Known only from the type locality.

**Homalopoma lurida** Dall 1885, Proc. U. S. Nat. Mus., vol. 8, p. 542.

*Reference.* Oldroyd, 1927c, p. 167.

*Type Locality.* Puget Sound.

*Range.* Puget Sound to Cape San Lucas, Lower California.

## Order Mesogastropoda

## Family EPITONIIDAE

Genus *Epitonium* Bolten 1798Subgenus *Acirsa* Mörch 1857

**Epitonium boreale** (Beck) Lyell 1839, The Rising of Sweden, p. 37.

*References.* Oldroyd, 1927b, p. 54; Johnson, 1934, p. 82.

*Type Locality.* Sweden?

*Range.* Aleutian Islands, Alaska. Circumboreal. Greenland.

**Epitonium boreale ochotense** Middendorff 1849, Beitr. Malac. Rossica, vol. 2, p. 98.

*Reference.* Oldroyd, 1927b, p. 55.

*Type Locality.* South coast of the Sea of Okhotsk.

*Range.* Known only from the type locality.

**Epitonium costulatum** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 50.

*References.* Whiteaves, 1901a, p. 162; Johnson, 1915, p. 104; 1934, p. 81.

*Type Locality.* Casco Bay, Maine.

*Range.* Near Eastport, Maine, 10 to 40 fms. From Haddock, Casco Bay, Maine.



Subgenus *Boreoscala* Kobelt 1902

**Epitonium greenlandicum** Perry 1811, Conchology, pl. 28, fig. 8.

*References.* Whiteaves, 1901a, p. 163; Johnson, 1915, p. 103; Oldroyd, 1927b, p. 55; Grant and Gale, 1931, p. 856; Johnson, 1934, p. 82.

*Type Locality.* Greenland.

*Range.* Arctic Ocean near Point Barrow and southward to Japan and Wrangell, Alaska. Circumboreal. Greenland to off Block Island, Rhode Island, 10 to 109 fms. Pliocene of the West Coast.

Section *Crisposcala* De Boury 1909

**Epitonium catalinae** Dall 1908, Proc. U. S. Nat. Mus., vol. 34, p. 252.

*Reference.* Oldroyd, 1927b, p. 65.

*Type Locality.* South side of Catalina Island, California.

*Range.* Forrester Island, Alaska, to San Diego, California.

Subgenus *Nitidiscala* De Boury 1909

**Epitonium caamanoi** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 13.

*References.* Oldroyd, 1927b, p. 62; Grant and Gale, 1931, p. 858.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Vancouver Island, British Columbia, to San Pedro, California. Pleistocene of California.

**Epitonium crebricostatum** Carpenter 1866, Proc. Calif. Acad. Sci., vol. 3, p. 222.

*References.* Oldroyd, 1927b, p. 61; Grant and Gale, 1931, p. 858.

*Type Locality.* Monterey, California.

*Range.* Vancouver Island, British Columbia, to Gulf of California. Pleistocene of California.

**Epitonium densiclathratum** Dall 1917, Proc. U. S. Nat. Mus., vol. 53, p. 478.

*Reference.* Oldroyd, 1927b, p. 61.

*Type Locality.* Puget Sound, Washington.

*Range.* Neah Bay, Washington, to San Diego, California.

**Epitonium indianorum** Carpenter 1865, Ann. Mag. Nat. Hist., 3rd ser., vol. 15, p. 31.

*References.* Oldroyd, 1927b, p. 57; Grant and Gale, 1931, p. 859.

*Type Locality.* Neah Bay, Washington.

*Range.* Forrester Island, Alaska, to Todos Santos Bay, Lower California. Pliocene and Pleistocene of California.

**Epitonium tinctum** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 660.

*References.* Oldroyd, 1927b, p. 58; Grant and Gale, 1931, p. 860.

*Type Locality.* San Pedro, California.

*Range.* Vancouver Island, British Columbia, to Lower California. Pliocene and Pleistocene of California.

*Synonym.* *E. subcoronatum* Carpenter 1866.

Subgenus *Opalia* H. and A. Adams 1853

**Epitonium evictum** De Boury 1919, Jour. de Conchyl., vol. 14, p. 36.

*Reference.* Strong, 1937, p. 6.

*Type Locality.* Neah Bay, Washington.

*Range.* Forrester Island, Alaska, to Magdalena Bay, Lower California.

*Synonym.* *O. pluricostata* Dall 1917, *non* De Boury 1913—? = *O. montereyensis* Dall.

**Epitonium wroblewskii** Mörch 1876, Conchol. Iconica, Scalaria.

*References.* Oldroyd, 1927b, p. 51; Grant and Gale, 1931, p. 853.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Forrester Island, Alaska, to San Diego, California. Miocene?, Pliocene, and Pleistocene of California.

*Synonym.* *Scalaria borealis* Gould *non* Beck.

## Family IANTHINIDAE

Genus *Ianthina* Bolten 1798

**Ianthina globosa** Swainson 1822, Zoöl. Illustr., Ser. I, vol. 2, pl. 85.

*Reference.* Oldroyd, 1927b, p. 67.

*Type Locality.* Cornwall, England.

*Range.* Puget Sound to Gulf of California. Pelagic. Europe.

## Family MELANELLIDAE

Genus *Melanella* Bowdich 1822

**Melanella columbiana** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 53, p. 324.

*Reference.* Oldroyd, 1927b, p. 71.

*Type Locality.* Departure Bay, British Columbia.

*Range.* Baranoff Island, Alaska, to Departure Bay, British Columbia.

**Melanella comoxensis** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 53, p. 325.

*Reference.* Oldroyd, 1927b, p. 71.

*Type Locality.* Comox, British Columbia.

*Range.* Known only from the type locality.

**Melanella macra** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 53, p. 326.

*Reference.* Oldroyd, 1927b, p. 72.

*Type Locality.* Departure Bay, British Columbia.

*Range.* Departure Bay, British Columbia, to Seattle, Washington.

**Melanella stenostoma** Jeffreys 1858, Ann. Mag. Nat. Hist., 3rd ser., vol. 2, p. 128.

*References.* Whiteaves, 1901a, p. 163; Johnson, 1915, p. 91; 1934, p. 84.

*Type Locality.* Shetland.

*Range.* Gulf of St. Lawrence to Woods Hole, Massachusetts.

Section *Eulima* Risso 1826

**Melanella micans** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 659.

*References.* Oldroyd, 1927b, p. 74; Grant and Gale, 1931, p. 863.

*Type Locality.* San Pedro, California.

*Range.* Vancouver Island, British Columbia, to Point Abreojos, Lower California. Pleistocene of California.

**Melanella micans borealis** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 53, p. 305.

*Reference.* Oldroyd, 1927b, p. 75.

*Type Locality.* Comox, Vancouver Island, British Columbia.

*Range.* Kodiak Island, Alaska, to Vancouver Island, British Columbia.

**Melanella randolphi** Vanatta 1899, Proc. Acad. Nat. Sci. Phila., 1899, p. 256.

*References.* Oldroyd, 1927b, p. 76; Eyerdam, 1933, p. 126.

*Type Locality.* Unalaska, Alaska, under stones.

*Range.* Aleutian Islands, Alaska, to Puget Sound, Washington.

**Melanella rutila** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci., for 1863, p. 359.

*References.* Oldroyd, 1927b, p. 75; Grant and Gale, 1931, p. 863.

*Type Locality.* Monterey, California.

*Range.* Craig, Alaska, to Vancouver Island, British Columbia, and Magdalena Bay, Lower California. Pleistocene of California.

**Melanella tacomaënsis** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 53, p. 316.

*Reference.* Oldroyd, 1927b, p. 78.

*Type Locality.* Tacoma, Washington.

*Range.* Known only from the type locality.

Subgenus *Sabinella* Monterosato 1890

**Melanella ptilocrinicola** Bartsch 1907, Proc. U. S. Nat. Mus., vol. 32, p. 555.

*Reference.* Oldroyd, 1927b, p. 79.

*Type Locality.* Albatross Station 3342, 1,588 fms.

*Range.* Parasitic on *Ptilocrinus* in 1,588 fms., off British Columbia.

Genus *Entocolax* Voight 1888

**Entocolax ludwigi** Voight 1888, Zeitschr. Wiss. Zoöl., vol. 47, p. 658.

*References.* Dall, 1921a, p. 119; Oldroyd, 1927b, p. 79.

*Type Locality.* ?

*Range.* Bering Sea, parasite of *Myriotrochus*.

Genus *Aclis* Lovén 1846

***Aclis striata*** Verrill 1880, Proc. U. S. Nat. Mus., vol. 3, p. 377.

*References.* Johnson, 1915, p. 105; 1934, p. 85.

*Type Locality.* Off Newport, Rhode Island.

*Range.* Bay of Fundy. Off Newport, Rhode Island, 100 fms.

***Aclis walleri*** Jeffreys 1867, Brit. Conch., vol. 4, p. 105.

*References.* Verrill, 1882b, p. 528; Posselt, 1898, p. 221; Johnson, 1934, p. 85.

*Type Locality.* Great Britain.

*Range.* Greenland ?. Labrador. Off Martha's Vineyard, Massachusetts, 365 to 487 fms.

Genus *Strombiformis* Da Costa 1778

***Strombiformis alaskensis*** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 53, p. 339.

*Reference.* Oldroyd, 1927b, p. 82.

*Type Locality.* Dutch Harbour, Unalaska, Alaska.

*Range.* Known only from the type locality.

## Family PYRAMIDELLIDAE

Genus *Pyramidella* Lamarck 1799Subgenus *Syrnola* A. Adams 1860

***Pyramidella fusca*** C. B. Adams 1839, Boston Jour. Nat. Hist., vol. 2, p. 282.

*References.* Verrill, 1873, p. 656; Whiteaves, 1901a, p. 162; Johnson, 1915, p. 93; 1934, p. 86.

*Type Locality.* New Bedford, Massachusetts.

*Range.* Prince Edward Island to Florida.

Genus *Turbonilla* Risso 1826

***Turbonilla nivea*** Stimpson 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 114.

*References.* Whiteaves, 1901a, p. 161; Johnson, 1915, p. 93; 1934, p. 87.

*Type Locality.* "Off Grand Manan".

*Range.* Off Grand Manan to New Haven, Connecticut, 40 to 100 fms.

Subgenus *Chemnitzia* d'Orbigny 1839

***Turbonilla engbergi*** Bartsch 1920, Jour. Wash. Acad. Sci., 1920, vol. 10, p. 570.

*Reference.* Oldroyd, 1927b, p. 91.

*Type Locality.* San Juan Island, Washington.

*Range.* Known only from the type locality.

Subgenus *Mormula* A. Adams 1864

**Turbonilla eschscholtzi** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 513.

*Reference.* Oldroyd, 1927b, p. 145.

*Type Locality.* Carter Bay, British Columbia.

*Range.* Port Simpson to Vancouver Island, British Columbia.

**Turbonilla lordi** E. A. Smith 1880, Ann. Mag. Nat. Hist., ser. 5, vol. 6, p. 288.

*Reference.* Oldroyd, 1927b, p. 149.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

Subgenus *Pyrgiscus* Philippi 1841

**Turbonilla edwardensis** Bartsch 1909, Proc. Boston Soc. Nat. Hist., vol. 34, p. 96.

*Reference.* Johnson, 1934, p. 88.

*Type Locality.* Prince Edward Island.

*Range.* Known only from the type locality.

**Turbonilla hecuba** Dall and Bartsch 1913, Victoria Memorial Museum, Bull. 1, p. 141.

*Reference.* Johnson, 1934, p. 89.

*Type Locality.* Barrington Passage, Nova Scotia, 19 fms.

*Range.* Known only from the type locality.

**Turbonilla interrupta fulvocincta** Thompson 1840, Ann. Mag. Nat. Hist., vol. 5, p. 98.

*References.* Whiteaves, 1901a, p. 161; Johnson, 1934, p. 89.

*Type Locality.* Portmarnock, near Dublin, Ireland.

*Range.* Shediac Bay, New Brunswick, 2 to 10 fms. Prince Edward Island. Europe.

**Turbonilla whiteavesi** Bartsch 1909, Proc. Boston Soc. Nat. Hist., vol. 34, p. 93.

*Reference.* Johnson, 1934, p. 89.

*Type Locality.* None designated.

*Range.* Shediac Bay, New Brunswick; Prince Edward Island.

Subgenus *Pyrgolampros* Sacco 1892

**Turbonilla alaskana** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 70.

*Reference.* Oldroyd, 1927b, p. 114.

*Type Locality.* St. Paul, Kodiak, Alaska.

*Range.* Kodiak to Sitka, Alaska.

**Turbonilla aurantia** Carpenter 1865, Jour. de Conchyl., vol. 13, p. 147.

*References.* Oldroyd, 1927b, p. 123; Grant and Gale, 1931, p. 869.

*Type Locality.* "Santa Barbara . . . to Puget Sound".

*Range.* Departure Bay, Victoria, British Columbia, and Puget Sound. Pleistocene of California.

**Turbonilla eyerdami** Bartsch 1927, Proc. U. S. Nat. Mus., vol. 70, p. 9.

*Reference.* Oldroyd, 1927b, p. 283.

*Type Locality.* Shuyak Strait, Afognak Island, Alaska.

*Range.* Known only from the type locality.

**Turbonilla lituyana** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 72.

*Reference.* Oldroyd, 1927b, p. 117.

*Type Locality.* Lituya Bay, Alaska.

*Range.* Known only from the type locality.

**Turbonilla lyalli** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 500.

*Reference.* Oldroyd, 1927b, p. 120.

*Type Locality.* Banks Island, British Columbia.

*Range.* Known only from the type locality.

**Turbonilla macouni** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 15.

*Reference.* Oldroyd, 1927b, p. 122.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Turbonilla middendorffi** Bartsch 1927, Proc. U. S. Nat. Mus., vol. 70, p. 8.

*Reference.* Oldroyd, 1927b, p. 283.

*Type Locality.* Afognak Island, Alaska.

*Range.* Known only from the type locality.

**Turbonilla newcombei** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 45.

*Reference.* Oldroyd, 1927b, p. 108.

*Type Locality.* Port Simpson, British Columbia.

*Range.* Port Simpson to Victoria, British Columbia.

**Turbonilla oregonensis** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 503.

*Reference.* Oldroyd, 1927b, p. 118.

*Type Locality.* U. S. Bur. Fisheries Albatross Station 2885, off Oregon.

*Range.* Off the coasts of Oregon and Washington.

**Turbonilla pedroana** Dall and Bartsch 1903, Mem. Calif. Acad. Sci., vol. 3, p. 279.



*References.* Oldroyd, 1927b, p. 121; Grant and Gale, 1931, p. 869.

*Type Locality.* Off San Pedro, California.

*Range.* Victoria, British Columbia, to San Diego, California. Pleistocene of California.

**Turbonilla pesa** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 14.

*Reference.* Oldroyd, 1927b, p. 119.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Turbonilla pugetensis** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 647.

*Reference.* Oldroyd, 1927b, p. 113.

*Type Locality.* Northwest Point, Elliot Bay, Seattle, Washington.

*Range.* Puget Sound, Washington.

**Turbonilla rinella** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 14.

*References.* Oldroyd, 1927b, p. 120; Grant and Gale, 1931, p. 870.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Type locality and Pleistocene of California.

**Turbonilla shuyakensis** Bartsch 1927, Proc. U. S. Nat. Mus., vol. 70, p. 7.

*Reference.* Oldroyd, 1927b, p. 282.

*Type Locality.* Shuyak Strait, Afognak Island, Alaska.

*Range.* Known only from the type locality.

**Turbonilla stelleri** Bartsch 1927, Proc. U. S. Nat. Mus., vol. 70, p. 6.

*Reference.* Oldroyd, 1927b, p. 281.

*Type Locality.* Shuyak Strait, Afognak Island, Alaska.

*Range.* Known only from the type locality.

**Turbonilla talma** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 13.

*Reference.* Oldroyd, 1927b, p. 110.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Turbonilla taylori** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 499.

*Reference.* Oldroyd, 1927b, p. 109.

*Type Locality.* Departure Bay, British Columbia.

*Range.* Port Simpson to Vancouver Island, British Columbia.

**Turbonilla valdezi** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 502.

*References.* Oldroyd, 1927b, p. 108; Grant and Gale, 1931, p. 868.

*Type Locality.* Monterey, California.

*Range.* Barkley Sound, Vancouver Island, British Columbia, to Monterey, California. Pleistocene of California.



**Turbonilla victoriana** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 501.

*Reference.* Oldroyd, 1927b, p. 107.

*Type Locality.* Victoria, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

Subgenus *Strioturbonilla* Sacco 1892

**Turbonilla canadensis** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 641.

*Reference.* Oldroyd, 1927b, p. 96.

*Type Locality.* Forrester Island, Alaska.

*Range.* Known only from the type locality.

**Turbonilla vancouverensis** Baird 1863, Proc. Zoöl. Soc. London, 1863, p. 67.

*Reference.* Oldroyd, 1927b, p. 96.

*Type Locality.* Esquimalt Harbour, Vancouver Island, British Columbia, from crop of Pintail duck.

*Range.* Port Etches, Alaska, to Puget Sound.

**Turbonilla barkleyensis** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 641.

*Reference.* Oldroyd, 1927b, p. 105.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Turbonilla kincaidi** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 33.

*Reference.* Oldroyd, 1927b, p. 104.

*Type Locality.* Dogfish Bay, Puget Sound.

*Range.* Puget Sound, Washington.

Genus *Stilbe* Jeffreys 1884

**Stilbe acuta** Jeffreys 1884, Proc. Zoöl. Soc. London, 1884, p. 130.

*Reference.* Johnson, 1934, p. 87.

*Type Locality.* "Porcupine Exp. 1870, Atl. St. 16."

*Range.* Off Labrador, N. 55° 36', W. 54° 33', 1,622 fms.

Genus *Odostomia* Fleming 1817

Subgenus *Amaura* Möller 1842

**Odostomia arctica** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. No. 68, p. 224.

*Reference.* Oldroyd, 1927b, p. 212.

*Type Locality.* Hagemeister Island, Bering Sea.

*Range.* Seahorse Islands, Arctic Ocean, to Bristol Bay, Bering Sea.

**Odostomia avellana** Carpenter 1865, Ann. Mag. Nat. Hist., 3rd ser., vol. 15, p. 30.

*References.* Oldroyd, 1927b, p. 212; Grant and Gale, 1931, p. 876.

*Type Locality.* Neah Bay, Washington.

*Range.* Type locality and Pleistocene of California.

**Odostomia beringi** Dall 1871, Amer. Jour. Conch., vol. 7, p. 117.

*Reference.* Oldroyd, 1927b, p. 213.

*Type Locality.* St. Michael, Norton Sound, Alaska.

*Range.* Known only from the type locality.

**Odostomia candida** Möller 1842, Krøyer's Tidskr., vol. 4, p. 80.

*References.* Verrill, 1882b, p. 517; Whiteaves, 1901a, p. 164; Johnson, 1934, p. 94.

*Type Locality.* Godthaab, Greenland.

*Range.* Circumpolar, south to Gaspé Bay, Gulf of St. Lawrence, 30 fms. Pliocene of England.

**Odostomia canfieldi** Dall 1908, Nautilus, vol. 31, p. 131.

*Reference.* Oldroyd, 1927b, p. 213.

*Type Locality.* Monterey, California.

*Range.* Barkley Sound, British Columbia, to San Diego, California.

**Odostomia eldorana** Bartsch 1912, Proc. U. S. Nat. Mus., vol. 42, p. 287.

*Reference.* Oldroyd, 1927b, p. 214.

*Type Locality.* Kodiak Island, Alaska.

*Range.* Known only from the type locality.

**Odostomia elsa** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 220.

*Reference.* Oldroyd, 1927b, p. 214.

*Type Locality.* Kodiak Island, Alaska.

*Range.* Known only from the type locality.

**Odostomia engbergi** Bartsch 1920, Jour. Wash. Acad. Sci., vol. 10, p. 572.

*Reference.* Oldroyd, 1927b, p. 214.

*Type Locality.* Off San Juan Island, Puget Sound.

*Range.* San Juan Islands, Gulf of Georgia.

**Odostomia gouldii** Carpenter 1865, Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 29.

*Reference.* Grant and Gale, 1931, p. 876.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

**Odostomia grippiana** Bartsch 1912, Proc. U. S. Nat. Mus., vol. 42, p. 287.

*Reference.* Oldroyd, 1927b, p. 215.

*Type Locality.* Nanaimo, British Columbia.

*Range.* Known only from the type locality.

**Odostomia iliuliukensis** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 227.

*Reference.* Oldroyd, 1927b, p. 216.

*Type Locality.* Off Iliuliuk village, Captain's Bay, Unalaska, Alaska.

*Range.* Known only from the type locality.

**Odostomia kennerlyi** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 529.

*Reference.* Oldroyd, 1927b, p. 217.

*Type Locality.* Nanaimo, British Columbia.

*Range.* Nanaimo, British Columbia, to Monterey, California.

**Odostomia krausei** Clessin 1900, Conchylien Cabinet, 2nd ed., Pyramid., p. 115.

*Reference.* Oldroyd, 1927b, p. 217.

*Type Locality.* Japan.

*Range.* Kodiak to Killisnoo, Alaska.

**Odostomia martensi** Dall and Bartsch 1906, Proc. U. S. Nat. Mus., vol. 30, p. 361.

*Reference.* Oldroyd, 1927b, p. 218.

*Type Locality.* Killisnoo, Alaska.

*Range.* Known only from the type locality.

**Odostomia nuciformis** Carpenter 1865, Ann. Mag. Nat. Hist., 3rd ser., vol. 15, p. 30.

*Reference.* Oldroyd, 1927b, p. 220.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

**Odostomia pesa** Dall and Bartsch 1909, Bull. U. S. Nat. Mus., vol. 68, p. 226.

*Reference.* Oldroyd, 1927b, p. 221.

*Type Locality.* Kodiak Island, Alaska.

*Range.* Known only from the type locality.

**Odostomia sanjuanensis** Bartsch 1920, Jour. Wash. Acad. Sci., vol. 10, p. 571.

*Reference.* Oldroyd, 1927b, p. 221.

*Type Locality.* Near San Juan Island, Puget Sound.

*Range.* Gulf of Georgia.

**Odostomia satura** Carpenter 1865, Ann. Mag. Nat. Hist., 3rd ser., vol. 15, p. 29.

*References.* Oldroyd, 1927b, p. 222; Grant and Gale, 1931, p. 876.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality and the Pleistocene of California.

**Odostomia sillana** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 222.

*Reference.* Oldroyd, 1927b, p. 222.

*Type Locality.* West of Amaknak Island, Unalaska, Alaska.

*Range.* Captain's Bay, Unalaska.

**Odostomia talpa** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 222.

*Reference.* Oldroyd, 1927b, p. 224.

*Type Locality.* Mole Harbour, Alaska.

*Range.* Mole Harbour and Sitka Harbour, Alaska.

**Odostomia washingtonia** Bartsch 1920, Jour. Wash. Acad. Sci., vol. 10, p. 571.

*Reference.* Oldroyd, 1927b, p. 224.

*Type Locality.* San Juan Island, Puget Sound.

*Range.* Known only from the type locality.

#### Subgenus *Chrysallida* Carpenter 1856

**Odostomia cumshewaensis** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 34.

*Reference.* Oldroyd, 1927b, p. 166.

*Type Locality.* Cumshewa Inlet, Queen Charlotte Islands, British Columbia.

*Range.* Known only from the type locality.

**Odostomia oregonensis** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 516.

*Reference.* Oldroyd, 1927b, p. 163.

*Type Locality.* Cumshewa Inlet, Queen Charlotte Islands, British Columbia.

*Range.* Queen Charlotte Islands, British Columbia, to Monterey, California.

**Odostomia seminuda** C. B. Adams 1839, Boston Jour. Nat. Hist., vol. 2, p. 280.

*References.* Verrill, 1873, p. 657; Whiteaves, 1901a, p. 161; Johnson, 1915, p. 97; 1934, p. 92.

*Type Locality.* Dartmouth Harbour, Massachusetts.

*Range.* Prince Edward Island to Gulf of Mexico.

**Odostomia willisi** Bartsch 1909, Proc. Boston Soc. Nat. Hist., vol. 34, p. 99.

*Reference.* Johnson, 1934, p. 92.

*Type Locality.* Summerside, Prince Edward Island.

*Range.* Prince Edward Island.

Subgenus *Evalea* A. Adams 1860

**Odostomia aleutica** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 196.

*Reference.* Oldroyd, 1927b, p. 182.

*Type Locality.* Station 3336, in Iliuliuk Harbour, Bering Sea, Alaska.

*Range.* Captain's Harbour, Unalaska, Alaska, to Amaknak Island, Unalaska, Alaska.

**Odostomia amchitkana** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 210.

*Reference.* Oldroyd, 1927b, p. 183.

*Type Locality.* Constantine Harbour, Amchitka Island, Alaska.

*Range.* Amchitka Island, Aleutians, to Peril Strait, Alaska.

**Odostomia angularis** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 523.

*Reference.* Oldroyd, 1927b, p. 183.

*Type Locality.* Nanaimo, British Columbia.

*Range.* Sitka, Alaska, to Port Harford, California.

**Odostomia baranoffensis** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 215.

*Reference.* Oldroyd, 1927b, p. 185.

*Type Locality.* Bear Bay, Peril Straits, Baranoff Island, Alaska.

*Range.* Baranoff and Admiralty Islands, Alaska.

**Odostomia barkleyensis** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 19.

*Reference.* Oldroyd, 1927b, p. 185.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Odostomia capitana** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 200.

*Reference.* Oldroyd, 1927b, p. 188.

*Type Locality.* Captain's Harbour, Unalaska, Alaska.

*Range.* Captain's Harbour to Kodiak, Alaska.

**Odostomia cassandra** Bartsch 1912, Proc. U. S. Nat. Mus., vol. 42, p. 285.

*Reference.* Oldroyd, 1927b, p. 188.

*Type Locality.* Skidegate, Queen Charlotte Islands, British Columbia.

*Range.* Known only from the type locality.

**Odostomia clessini** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 211.

*Reference.* Oldroyd, 1927b, p. 189.

*Type Locality.* Bear Bay, Peril Straits, Baranoff Island, Alaska.

*Range.* Baranoff and Admiralty Islands, Alaska.

**Odostomia columbiana** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 525.

*Reference.* Oldroyd, 1927b, p. 189.

*Type Locality.* Victoria, Vancouver Island, British Columbia.

*Range.* Fort Rupert, British Columbia, to Puget Sound.

**Odostomia cookeana** Bartsch 1912, Nautilus, vol. 23, p. 138.

*Reference.* Oldroyd, 1927b, p. 190.

*Type Locality.* Ellamar, Alaska.

*Range.* Known only from the type locality.

**Odostomia cypria** Dall and Bartsch 1912, Proc. U. S. Nat. Mus., vol. 42, p. 282.

*Reference.* Oldroyd, 1927b, p. 190.

*Type Locality.* Skidegate, Queen Charlotte Islands, British Columbia.

*Range.* Known only from the type locality.

**Odostomia deliciosa** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 525.

*Reference.* Oldroyd, 1927b, p. 191.

*Type Locality.* Monterey, California.

*Range.* Barkley Sound, Vancouver Island, British Columbia, to Monterey, California.

**Odostomia eyerdami** Bartsch 1927, Proc. U. S. Nat. Mus., vol. 70, p. 18.

*Reference.* Oldroyd, 1927b, p. 290.

*Type Locality.* Shuyak Strait, Afognak Island, Alaska.

*Range.* Known only from the type locality.

**Odostomia hagemeisteri** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 216.

*Reference.* Oldroyd, 1927b, p. 193.

*Type Locality.* Hagemeister Island, Bering Sea.

*Range.* Known only from the type locality.

**Odostomia hypatia** Dall and Bartsch 1912, Proc. U. S. Nat. Mus., vol. 42, p. 282.

*Reference.* Oldroyd, 1927b, p. 194.

*Type Locality.* Skidegate, Queen Charlotte Islands, British Columbia.

*Range.* Known only from the type locality.

**Odostomia inflata** (Carpenter) Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 524.

*Reference.* Oldroyd, 1927b, p. 195.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

**Odostomia kadiakensis** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 197.

*Reference.* Oldroyd, 1927b, p. 196.

*Type Locality.* Kodiak Island, Alaska.

*Range.* Known only from the type locality.

**Odostomia killisnooënsis** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 195.

*Reference.* Oldroyd, 1927b, p. 197.

*Type Locality.* Killisnoo, Alaska.

*Range.* Known only from the type locality.

**Odostomia nunivakensis** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 194.

*Reference.* Oldroyd, 1927b, p. 199.

*Type Locality.* Nunivak Island, Alaska.

*Range.* Known only from the type locality.

**Odostomia quadrae** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 17.

*Reference.* Oldroyd, 1927b, p. 202.

*Type Locality.* Ship Channel, Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Odostomia septentrionalis** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 200.

*Reference.* Oldroyd, 1927b, p. 204.

*Type Locality.* Unalaska, Alaska.

*Range.* Known only from the type locality.

**Odostomia sitkaensis** Clessin 1900, Conchyl. Cab., 2nd ed., Pyramidella, No. 121, p. 30.

*Reference.* Oldroyd, 1927b, p. 205.

*Type Locality.* Sitka, Alaska.

*Range.* Known only from the type locality.

**Odostomia skidegatensis** Bartsch 1912, Proc. U. S. Nat. Mus., vol. 42, p. 284.

*Reference.* Oldroyd, 1927b, p. 205.

*Type Locality.* Skidegate, Queen Charlotte Islands, British Columbia.

*Range.* Skidegate, Queen Charlotte Islands, British Columbia, to Trinidad, California.

**Odostomia spreadboroughi** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 17.

*Reference.* Oldroyd, 1927b, p. 206.

*Type Locality.* Ship Channel, Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.



**Odostomia stephensae** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 210.

*Reference.* Oldroyd, 1927b, p. 206.

*Type Locality.* Bear Bay, Peril Straits, Baranoff Island, Alaska.

*Range.* Bear Bay, Peril Straits, to Barkley Sound, British Columbia.

**Odostomia tacomaënsis** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 526.

*Reference.* Oldroyd, 1927b, p. 207.

*Type Locality.* Tacoma, Washington.

*Range.* Known only from the type locality.

**Odostomia tenuisculpta** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 659.

*Reference.* Oldroyd, 1927b, p. 207.

*Type Locality.* Neah Bay, Washington.

*Range.* Barkley Sound, Vancouver Island, British Columbia, to Lower California.

**Odostomia unalashkensis** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 203.

*Reference.* Oldroyd, 1927b, p. 209.

*Type Locality.* Captain's Harbour, Unalaska, Alaska.

*Range.* Known only from the type locality.

**Odostomia vancouverensis** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 18.

*Reference.* Oldroyd, 1927b, p. 210.

*Type Locality.* Ship Channel, Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Odostomia willetti** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 666.

*Reference.* Oldroyd, 1927b, p. 211.

*Type Locality.* Waterfall Cannery, west side of Prince of Wales Island, Alaska.

*Range.* Known only from the type locality.

**Odostomia youngi** Dall and Bartsch 1912, Proc. U. S. Nat. Mus., vol. 42, p. 277.

*Reference.* Oldroyd, 1927b, p. 211.

*Type Locality.* Ship Channel, Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

#### Subgenus *Menestho* Möller 1842

**Odostomia bisuturalis** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 244.

*References.* Verrill, 1873, p. 656; Whiteaves, 1901a, p. 162; Johnson, 1915, p. 99; 1934, p. 91.

*Type Locality.* Boston Harbour, Massachusetts.

*Range.* Gulf of St. Lawrence to Delaware Bay, 1 to 2 fms.

**Odostomia hypocurta** Dall and Bartsch 1909, U. S. Nat. Mus., Bull. 68, p. 190.

*Reference.* Oldroyd, 1927b, p. 181.

*Type Locality.* U. S. Bur. Fisheries Station 3306, off Bristol Bay, Bering Sea, Alaska.

*Range.* Known only from the type locality.

**Odostomia pharcida** Dall and Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 520.

*Reference.* Oldroyd, 1927b, p. 181.

*Type Locality.* Cumshewa Inlet, Queen Charlotte Islands, British Columbia.

*Range.* Known only from the type locality.

**Odostomia trifida bedequensis** Bartsch 1909, Proc. Boston Soc. Nat. Hist., vol. 34, p. 106.

*References.* Whiteaves, 1901a, p. 162; Johnson, 1934, p. 91.

*Type Locality.* Bedeque, Prince Edward Island.

*Range.* Known only from the type locality.

#### Family PTEROTRACHEIDAE

Genus *Cardiapoda* d'Orbigny 1836

**Cardiapoda placenta** Lesson 1830, Voyage de la "Coquille," Zoöl., p. 253.

*Reference.* Oldroyd, 1927b, p. 227.

*Type Locality.* North Pacific.

*Range.* "North Pacific and North Atlantic."

#### Family CARINARIIDAE

Genus *Carinaria* Lamarck 1801

**Carinaria punctata** d'Orbigny 1836, Voyage en Amérique méridionale, vol. 5, p. 160.

*Reference.* Oldroyd, 1927b, p. 229.

*Type Locality.* Unknown.

*Range.* "North and South Pacific. Pelagic."

#### Family ATLANTIDAE

Genus *Atlanta* LeSueur 1817

**Atlanta cunicula** Gould 1852, Moll. and Shells, U. S. Expl. Exped., p. 492.

*Reference.* Oldroyd, 1927b, p. 232.

*Type Locality.* Lat. 28° N., long. 178° E., to the westward of the Sandwich Islands.

*Range.* North Pacific, pelagic.

**Atlanta depressa** Gray 1850, Figs. of Moll. Anim., vol. 4, p. 101.

*Reference.* Oldroyd, 1927b, p. 231.

*Type Locality.* Pacific Ocean.

*Range.* Pacific Ocean, pelagic.

**Atlanta gaudichaudii** Gray 1850, Figs. of Moll. Anim., vol. 4, p. 101.

*Reference.* Oldroyd, 1927b, p. 232.

*Type Locality.* None given.

*Range.* Pacific Ocean, pelagic.

**Atlanta helicinoidea** Gray 1850, Figs. of Moll. Anim., vol. 4, p. 101.

*Reference.* Oldroyd, 1927b, p. 232.

*Type Locality.* Pacific Ocean.

*Range.* Pacific Ocean, pelagic.

**Atlanta inclinata** Gray 1850, Figs. of Moll. Anim., vol. 4, p. 101.

*Reference.* Oldroyd, 1927b, p. 231.

*Type Locality.* None given.

*Range.* Pacific Ocean, pelagic.

**Atlanta involuta** Gray 1850, Figs. of Moll. Anim., vol. 4, p. 101.

*Reference.* Oldroyd, 1927b, p. 231.

*Type Locality.* Pacific Ocean.

*Range.* Pacific Ocean, pelagic.

**Atlanta peronii** LeSueur 1817, Jour. de Phys., vol. 85, p. 390.

*Reference.* Oldroyd, 1927b, p. 230.

*Type Locality.* North Pacific.

*Range.* North Pacific, pelagic.

**Atlanta quoyii** Gray 1850, Figs. of Moll. Anim., vol. 4, p. 101.

*Reference.* Oldroyd, 1927b, p. 233.

*Type Locality.* None given.

*Range.* Pacific Ocean, pelagic.

#### Family NATICIDAE

##### Genus *Natica* Scopoli 1777

##### Subgenus *Tectonatica* Sacco 1890

**Natica affinis** Gmelin 1792, Syst. Nat., Ed. 13, vol. 1, pt. 6, p. 3675.

*References.* Oldroyd, 1927c, p. 122; Johnson, 1934, p. 93.

*Type Locality.* Arctic Ocean.

*Range.* Arctic Ocean north of Bering Strait. Greenland.

**Natica aleutica** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 352.

*Reference.* Oldroyd, 1927c, p. 124.

*Type Locality.* Unalaska, Aleutian Islands.

*Range.* North end of Nunivak Island, Bering Sea, Aleutian chain to Puget Sound. Kamchatka to Japan.

**Natica clausa clausa** Broderip and Sowerby 1829, *Zoöl. Jour.*, vol. 4, p. 372.

*References.* Verrill, 1873, p. 647; Whiteaves, 1901a, p. 166; Oldroyd, 1927c, p. 122; Grant and Gale, 1931, p. 797; Johnson, 1934, p. 93.

*Type Locality.* Arctic.

*Range.* Arctic and Bering Seas to San Diego, California. Japan. Labrador to off North Carolina, 16 to 1,537 fms. Miocene of Washington and Oregon; Pliocene of California; Pleistocene of Japan, Alaska, England.

**Natica clausa vittata** Jeffreys 1877, *Ann. Mag. Nat. Hist.*, 4th ser., vol. 19, p. 318.

*Reference.* Johnson, 1934, p. 93.

*Type Locality.* Greenland.

*Range.* Greenland.

**Natica janthostoma** Deshayes 1841, *in* Guérin, *Magasin de Zoöl.*, Moll., pl. 45.

*Reference.* Oldroyd, 1927c, p. 123.

*Type Locality.* Kamchatka.

*Range.* Commander Islands, Bering Sea; Kamchatka south to Japan.

**Natica russa** Gould 1859, *Proc. Boston Soc. Nat. Hist.*, vol. 7, p. 43.

*References.* Oldroyd, 1927c, p. 123; Grant and Gale, 1931, p. 798.

*Type Locality.* Arctic Ocean.

*Range.* Bering Strait to Catalina Island, California; Kamchatka to Japan. Pliocene of Alaska and ?California; Pleistocene of California?

#### Genus *Bulbus* Brown 1839

**Bulbus fragilis** Leach 1819, *Jour. de Phys.*, vol. 88, p. 464.

*Reference.* Oldroyd, 1927c, p. 133.

*Type Locality.* South coast of Okhotsk Sea.

*Range.* Icy Cape, Arctic Ocean, south to the Aleutian Islands, and eastward to the Shumagin Islands.

**Bulbus smithii** Brown 1839, *Mem. Wern. Nat. Hist. Soc.*, vol. 8, p. 104.

*References.* Verrill, 1873, p. 647; Whiteaves, 1901a, p. 164; Johnson, 1915, p. 107; 1934, p. 94.

*Type Locality.* Ardincaple, Scotland; marine Pleistocene.

*Range.* Gulf of St. Lawrence to Georges Bank, 50 fms.

#### Genus *Amauropsis* Mörch 1857

**Amauropsis islandica** Gmelin 1790, *Syst. Nat.*, Ed. 13, vol. 1, pt. 6, p. 3675.

*References.* Whiteaves, 1901a, p. 164; Johnson, 1915, p. 107; 1934, p. 94.

*Type Locality.* "Oceano Septentrionali".

*Range.* Labrador to Georges Bank, 27 to 80 fms.

**Amauropsis purpurea** Dall 1871, Amer. Jour. Conch., vol. 7, p. 124.

*Reference.* Oldroyd, 1927c, p. 134.

*Type Locality.* St. Michael's, Norton Sound, Alaska.

*Range.* Arctic coast westward from Bernard Harbour to Point Barrow and south to Plover Bay and Nunivak Island, Bering Sea.

Genus *Polinices* Montfort 1810

**Polinices nanus** Möller 1842, Index Moll. Groenl., p. 7.

*References.* Verrill, 1882b, p. 516; Whiteaves, 1901a, p. 165; Johnson, 1915, p. 107; Oldroyd, 1927c, p. 130; Johnson, 1934, p. 94.

*Type Locality.* Greenland.

*Range.* Arctic Ocean to Aleutian Islands, and in deeper water near San Diego, California. Greenland to south of Block Island, Rhode Island, 22 to 115 fms. Off Fernandina, Florida, 294 fms.

Subgenus *Euspira* Agassiz in Sowerby 1838

**Polinices algida** Gould 1848, Proc. Boston Soc. Nat. Hist., vol. 3, p. 73.

*Reference.* Oldroyd, 1927c, p. 128.

*Type Locality.* Classet, Oregon.

*Range.* Coal Harbour, Shumagin Islands, Alaska, to Puget Sound, Washington.

**Polinices canonicus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 353.

*Reference.* Oldroyd, 1927c, p. 125.

*Type Locality.* U. S. Fish Comm. Station 2923, off San Diego, California, 822 fms.

*Range.* Off Alaska Peninsula, 2,923 fms., and off San Diego, California, 822 fms.

**Polinices caurinus** Gould 1847, Proc. Boston Soc. Nat. Hist., vol. 2, p. 239.

*Reference.* Oldroyd, 1927c, p. 127.

*Type Locality.* Straits of Juan de Fuca.

*Range.* Norton Sound, Alaska, to Puget Sound and San Diego, California, 822 fms.

**Polinices draconis** Dall 1903, Proc. Biol. Soc. Wash., vol. 16, p. 174.

*Reference.* Oldroyd, 1927c, p. 128.

*Type Locality.* Drake's Bay, California.

*Range.* Port Althorp, Alaska, to Catalina Island, California.

**Polinices groenlandicus** (Beck) Möller 1842, Index Moll. Groenl., p. 7.

*References.* Hancock, 1846, p. 332; Whiteaves, 1901a, p. 165; Johnson, 1915, p. 106; Oldroyd, 1927c, p. 126; Johnson, 1934, p. 94.

*Type Locality.* Greenland.

*Range.* Arctic seas southward in gradually deeper water to Monterey, California. Greenland to North Carolina, 70 to 80 fms.

**Polinices heros** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 248.

*References.* Whiteaves, 1901a, p. 165; Johnson, 1915, p. 106; 1934, p. 94.

*Type Locality.* New Jersey.

*Range.* Gulf of St. Lawrence to North Carolina, 1 to 238 fms.

**Polinices immaculata** Totten 1835, Amer. Jour. Sci., 1st ser., vol. 28, p. 351.

*References.* Whiteaves, 1901a, p. 165; Johnson, 1915, p. 106; 1934, p. 94.

*Type Locality.* Newport Harbour, Rhode Island.

*Range.* Gulf of St. Lawrence to North Carolina, 5 to 110 fms.

**Polinices lewisii** Gould 1847, Proc. Boston Soc. Nat. Hist., vol. 2, p. 239.

*References.* Oldroyd, 1927c, p. 127; Grant and Gale, 1931, p. 804.

*Type Locality.* Discovery Harbour, Puget Sound.

*Range.* Nanaimo, British Columbia, to Santa Barbara Island and San Diego, California. Miocene? of California, Pliocene and Pleistocene of California.

**Polinices monteronus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 352.

*Reference.* Oldroyd, 1927c, p. 125.

*Type Locality.* Station 1199, Captain's Bay, Unalaska, 75 fms.

*Range.* Arctic Ocean, Bering Sea, and the Aleutians.

**Polinices pallida** Broderip and Sowerby 1829, Zoöl. Jour., vol. 4, p. 372.

*Reference.* Oldroyd, 1927c, p. 126.

*Type Locality.* Arctic.

*Range.* Arctic Ocean; Forrester Island, Alaska; Puget Sound.

**Polinices politianus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 353.

*Reference.* Oldroyd, 1927c, p. 125.

*Type Locality.* U. S. Fish Comm. Station 4779, off Petrel Bank, Bering Sea, 600 fms.

*Range.* Known only from the type locality.

**Polinices triseriata** Say 1826, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 209.

*References.* Whiteaves, 1901a, p. 166; Johnson, 1915, p. 106; 1934, p. 94.

*Type Locality.* Boston Harbour.

*Range.* Gulf of St. Lawrence to North Carolina, 1 to 63 fms.

## Family LAMELLARIIDAE

Genus *Lamellaria* Montagu 1815

**Lamellaria stearnsii** Dall 1871, Amer. Jour. Conch., vol. 7, p. 122.

*Reference.* Oldroyd, 1927c, p. 135.

*Type Locality.* Monterey, California.

*Range.* Puget Sound to San Diego, California.

**Lamellaria stearnsii orbiculata** Dall 1871, Amer. Jour. Conch., vol. 7, p. 122.

*Reference.* Oldroyd, 1927c, p. 136.

*Type Locality.* Monterey Bay, California.

*Range.* Sannakh Islands, Alaska, to Gulf of California.

Genus *Marsenina* Gray 1850

**Marsenina glabra** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 90.

*References.* Whiteaves, 1901a, p. 167; Johnson, 1915, p. 108; 1934, p. 95.

*Type Locality.* Massachusetts Bay.

*Range.* Gulf of St. Lawrence to off Cape Cod, Massachusetts, 15 to 34 fms.

**Marsenina prodita** Lovén 1846, Öfvers. Kongl. Vet-Akad. Förh., vol. 3, p. 147.

*References.* Johnson, 1915, p. 109; 1934, p. 95.

*Type Locality.* Finmark.

*Range.* Greenland to Eastport, Maine.

**Marsenina rhombica** Dall 1871, Amer. Jour. Conch., vol. 7, p. 122.

*Reference.* Oldroyd, 1927c, p. 137.

*Type Locality.* Monterey Bay, California.

*Range.* Neah Bay, Washington, to Magdalena Bay, Lower California.

Genus *Velutina* Fleming 1822

**Velutina conica** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 305.

*Reference.* Oldroyd, 1927c, p. 139.

*Type Locality.* Unalaska, Alaska.

*Range.* Aleutian Islands to Kodiak and Forrester Islands, Alaska.

**Velutina coriacea** Pallas 1788, Nova Acta Acad. Petrop., vol. 3, p. 237.

*Reference.* Oldroyd, 1927c, p. 140.

*Type Locality.* Arctic.

*Range.* Bering Sea and the Okhotsk Sea.



**Velutina laevigata** Linné 1767, Syst. Nat., ed. 12, p. 1250.

*References.* Whiteaves, 1901a, p. 166; Johnson, 1915, p. 108; Oldroyd, 1927c, p. 140; Grant and Gale, 1931, p. 807; Johnson, 1934, p. 95.

*Type Locality.* England.

*Range.* Icy Cape, Arctic Ocean, to Monterey, California; Labrador to Massachusetts, 3 to 50 fms. Pliocene of Alaska.

**Velutina prolongata** Carpenter 1865, Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 32.

*Reference.* Oldroyd, 1927c, p. 140.

*Type Locality.* Neah Bay, Washington.

*Range.* Bering Strait to Monterey, California.

**Velutina sitkensis** A. Adams 1851, Proc. Zoöl. Soc. London, 1851, p. 225.

*Reference.* Oldroyd, 1927c, p. 141.

*Type Locality.* Sitka, Alaska.

*Range.* Bering Sea to Sitka, Alaska.

**Velutina undata** Brown 1839, Mem. Wern. Nat. Hist. Soc., vol. 8, p. 102.

*References.* Hancock, 1846, p. 331; Whiteaves, 1901a, p. 167; Johnson, 1915, p. 108; Oldroyd, 1927c, p. 139; Johnson, 1934, p. 95.

*Type Locality.* Pleistocene, Dalmuir, Scotland.

*Range.* Gulf of St. Lawrence to Massachusetts, 20 to 30 fms.

*Synonym.* *V. zonata* Gould 1841.

#### Genus *Velutella* Gray 1847

**Velutella cryptospira** Middendorff 1849, Beitr. Malac. Ross., pt. 2, p. 106.

*References.* Verrill, 1882b, p. 519; Whiteaves, 1901a, p. 167; Oldroyd, 1927c, p. 138.

*Type Locality.* Gulf of Alaska.

*Range.* Off Halifax, Nova Scotia, 57 fms. Gulf of Alaska.

#### Genus *Onchidiopsis* "Beck" Bergh 1853

**Onchidiopsis corys** Balch 1910, Proc. U. S. Nat. Mus., vol. 38, p. 470.

*Reference.* Johnson, 1934, p. 95.

*Type Locality.* Off Fish Island, Labrador, 75 fms.

*Range.* Known only from the type locality.

**Onchidiopsis hannai** Dall 1916, Proc. Acad. Nat. Sci. Phila., 1916, p. 376.

*Reference.* Oldroyd, 1927c, p. 137.

*Type Locality.* St. Paul Island, Bering Sea.

*Range.* Known only from the type locality.

**Onchidiopsis kingmaruensis** Russell 1942, Can. Jour. Res., vol. 20, pt. D, pp. 50-55.

*Type Locality.* Lake Harbour Fiord, Baffin Island, 30 fms.

*Range.* Known only from the type locality.

#### Family CAPULIDAE

##### Genus *Capulus* Montfort 1810

**Capulus ungaricus** Linné 1767, Syst. Nat., Ed. 12, vol. 1, p. 1259.

*References.* Verrill, 1882b, p. 519; Johnson, 1915, p. 110; 1934, p. 96.

*Type Locality.* "M. Mediterraneo".

*Range.* Greenland to Florida, 1 to 458 fms. Europe.

##### Genus *Pilidium* Middendorff 1849

**Pilidium commodum** Middendorff 1851, Sibirische Reise, vol. 2, p. 214.

*References.* Whiteaves, 1901a, p. 168; Oldroyd, 1927c, p. 111; Johnson, 1934, p. 96.

*Type Locality.* Okhotsk Sea.

*Range.* Off Nova Scotia, 150 fms. Arctic Ocean to Pribilof Islands, Bering Sea. Okhotsk Sea.

#### Family HIPPONICIDAE

##### Genus *Hipponix* DeFrance 1819

**Hipponix antiquatus cranioides** Carpenter 1864, Ann. Mag. Nat. Hist., 3rd ser., vol. 14, p. 427.

*References.* Oldroyd, 1927c, p. 113; Grant and Gale, 1931, p. 788.

*Type Locality.* Neah Bay, Washington.

*Range.* Vancouver Island, British Columbia, to San Pedro, California. Pleistocene of California.

#### Family CALYPTRAEIDAE

##### Genus *Calyptraea* Lamarck 1799

**Calyptraea fastigiata** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 161.

*References.* Oldroyd, 1927c, p. 115; Grant and Gale, 1931, p. 794.

*Type Locality.* Puget Sound.

*Range.* Port Etches, Alaska, to Puget Sound.

*Remarks.* Grant and Gale consider this species as a synonym of *C. mamillaris* Gould. If they are correct, the range should be extended to South America and should include the Miocene of Oregon and California and the Pliocene and Pleistocene of California.

Genus *Crucibulum* Schumacher 1817Subgenus *Dispotaea* Say 1826

**Crucibulum striatum** Say 1826, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 216.

*References.* Verrill, 1873, p. 651; Whiteaves, 1901a, p. 169; Johnson, 1915, p. 109; 1934, p. 96.

*Type Locality.* Three miles north of Long Branch, New Jersey.

*Range.* Nova Scotia to the Florida Keys, 3 to 189 fms.

## Family CREPIDULIDAE

Genus *Crepidula* Lamarck 1799

**Crepidula adunca** Sowerby 1825, Tankerville Catalogue, App. 7, No. 828.

*References.* Oldroyd, 1927c, p. 119; Grant and Gale, 1931, p. 791.

*Type Locality.* Monterey, California.

*Range.* Vancouver Island, British Columbia, to Cape San Lucas, Lower California. Miocene of Oregon and California; Pliocene and Pleistocene of California.

**Crepidula fornicata** Linné 1767, Syst. Nat., ed. 12, vol. 1, p. 1257.

*References.* Verrill, 1873, p. 649; Whiteaves, 1901a, p. 168; Johnson, 1915, p. 109; 1934, p. 97.

*Type Locality.* "Ad Ilvam insulam, inque M. Mediterraneo."

*Range.* Chaleur Bay to Texas and West Indies.

**Crepidula glauca glauca** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 226.

*References.* Ford, 1889, p. 90; Dall, 1890, p. 98; Johnson, 1915, p. 110; 1934, p. 97.

*Type Locality.* "Coast of the United States."

*Range.* Nova Scotia to Florida and Texas.

**Crepidula glauca convexa** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 227.

*References.* Verrill, 1873, p. 650; Whiteaves, 1901a, p. 169; Johnson, 1915, p. 110; 1934, p. 97; Vokes, 1935, pp. 37-39.

*Type Locality.* "United States."

*Range.* Nova Scotia to Florida and Texas.

**Crepidula grandis** Middendorff 1849, Beitr. Malac. Rossica, p. 101.

*Reference.* Oldroyd, 1927c, p. 116.

*Type Locality.* St. Paul Island, Bering Sea.

*Range.* Cape Franklin, Arctic Ocean, south and east to Sitka, Alaska. Kamchatka.

**Crepidula orbiculata** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 251.

*Reference.* Oldroyd, 1927c, p. 119.

*Type Locality.* Royal Roads, Victoria, British Columbia.

*Range.* Bering Sea to San Diego, California.

**Crepidula plana** Say 1822, Jour. Acad. Nat. Sci., Phila., vol. 2, p. 226.

*References.* Verrill, 1873, p. 650; Whiteaves, 1901a, p. 168; Johnson, 1915, p. 110; 1934, p. 97.

*Type Locality.* "New Jersey to Florida."

*Range.* Prince Edward Island to Texas.

#### Subgenus *Crepipatella* Lesson 1830

**Crepidula lingulata** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 160.

*References.* Oldroyd, 1927c, p. 120; Grant and Gale, 1931, p. 792.

*Type Locality.* Puget Sound, Washington.

*Range.* Bering Sea to Panama. Pliocene and Pleistocene of California.

#### Subgenus *Ianacus* Mörch 1852

**Crepidula fimbriata** Reeve 1859, Conchol. Icon. 11, fig. 11.

*Reference.* Oldroyd, 1927c, p. 121.

*Type Locality.* Vancouver Strait.

*Range.* Vancouver Island, British Columbia, to Gulf of California.

**Crepidula nivea** C. B. Adams 1852, Catalogue of Shells coll. at Panama, p. 234.

*Reference.* Oldroyd, 1927c, p. 121.

*Type Locality.* Panama.

*Range.* Puget Sound to Panama.

**Crepidula nummaria** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 160.

*References.* Oldroyd, 1927c, p. 120; Grant and Gale, 1931, p. 792.

*Type Locality.* Classet, Straits of Juan de Fuca.

*Range.* Plover Bay, Bering Strait, to Mazatlan, Mexico. Pliocene and Pleistocene of California.

#### Family SYNCERATIDAE

##### Genus *Syncera* Gray 1821

**Syncera translucens** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 613.

*References.* Oldroyd, 1927c, p. 110; Grant and Gale, 1931, p. 787.

*Type Locality.* San Diego, California, in shell washings.

*Range.* Vancouver Island, British Columbia, to Lower California. Pleistocene of California and Lower California.

Genus *Paludestrina* d'Orbigny 1840

**Paludestrina minuta** Totten 1834, Amer. Jour. Sci., 1st ser., vol. 26, p. 369.

*References.* Whiteaves, 1901a, p. 169; Johnson, 1915, p. 116; 1934, p. 97; Richards, 1936, p. 540.

*Type Locality.* "Massachusetts and Rhode Island."

*Range.* Labrador to New Jersey, in salt-marsh pools. James Bay (Richards).

## Family RISSOIDAE

Genus *Alvania* 'Leach' Risso 1826

**Alvania alaskana** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 307.

*Reference.* Oldroyd, 1927c, p. 92.

*Type Locality.* Nunivak Island, Alaska.

*Range.* Known only from the type locality.

**Alvania areolata** Stimpson 1851, Shells of New England, p. 35.

*References.* Verrill, 1882b, p. 524; Whiteaves, 1901a, p. 170; Johnson, 1915, p. 117; 1934, p. 98.

*Type Locality.* Massachusetts Bay.

*Range.* Gulf of St. Lawrence to off Martha's Vineyard, 10 to 130 fms.

**Alvania aurivillii** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 308.

*Reference.* Oldroyd, 1927c, p. 88.

*Type Locality.* Adakh Island, Alaska.

*Range.* Kyska to Adakh Island, Aleutians.

**Alvania bakeri** Bartsch 1910, Nautilus, vol. 23, p. 137.

*Reference.* Oldroyd, 1927c, p. 88.

*Type Locality.* Port Graham, Alaska.

*Range.* Port Graham, Cook's Inlet, Alaska.

**Alvania bryanti** Johnson 1926, Nautilus, vol. 39, p. 132.

*Reference.* Johnson, 1934, p. 98.

*Type Locality.* None designated by Johnson.

*Range.* Off Labrador and off St. Lawrence Harbour, Newfoundland, 15 to 25 fms.

**Alvania burrardensis** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 38.

*Reference.* Oldroyd, 1927c, p. 102.

*Type Locality.* Burrard Inlet, British Columbia.

*Range.* Known only from the type locality.

**Alvania carinata** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 49.

*References.* Whiteaves, 1901a, p. 170; Johnson, 1915, p. 116; 1934, p. 98.

*Type Locality.* Casco Bay, Maine.

*Range.* Gulf of St. Lawrence to Casco Bay, Maine, 96 to 200 fms.

**Alvania carpenteri** Weinkauff 1885, Conchyl. Cab., ed. 2, p. 192.

*Reference.* Oldroyd, 1927c, p. 91.

*Type Locality.* Neah Bay, Washington.

*Range.* Forrester Island, Alaska, to Neah Bay, Washington.

**Alvania castanea** Möller 1842, Krøyer's Naturh. Tidskr., vol. 4, p. 82.

*References.* Whiteaves, 1901a, p. 171; Johnson, 1915, p. 117; 1934, p. 98.

*Type Locality.* Greenland.

*Range.* Labrador to North Carolina, 2 to 102 fms.

**Alvania castanella** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 307.

*Reference.* Oldroyd, 1927c, p. 87.

*Type Locality.* Atka Island, Alaska.

*Range.* Kyska to Atka Island, Alaska.

**Alvania compacta** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 62.

*References.* Oldroyd, 1927c, p. 95; Vokes, 1936, p. 48.

*Type Locality.* Puget Sound, Washington.

*Range.* Port Etches, Alaska, to Trinidad and Moss Beach, California.

**Alvania dalli** Bartsch 1927, Proc. U. S. Nat. Mus., vol. 70, p. 30.

*Reference.* Oldroyd, 1927c, p. 103.

*Type Locality.* Shuyak Straits, Afognak Island, Alaska.

*Range.* Known only from the type locality.

**Alvania dinora** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 678.

*Reference.* Oldroyd, 1927c, p. 101.

*Type Locality.* Forrester Island, Alaska.

*Range.* Known only from the type locality.

**Alvania exarata** Stimpson 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 15.

*References.* Verrill, 1873, p. 654; Whiteaves, 1901a, p. 170; Johnson, 1915, p. 117; 1934, p. 98.

*Type Locality.* Boston Harbour.

*Range.* Bay of Fundy to North Carolina, 3 to 107 fms.

**Alvania filosa** Carpenter 1865, Ann. Mag. Nat. Hist., (3) vol. 14, p. 7.

*Reference.* Oldroyd, 1927c, p. 92.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

**Alvania globula** Möller 1842, Krøyer's Tidskr., vol. 4, p. 82.

*References.* Verrill, 1882b, p. 524; Whiteaves, 1901a, p. 169; Johnson, 1934, p. 98.

*Type Locality.* Greenland.

*Range.* Greenland to Gulf of St. Lawrence, 60 fms.

**Alvania iliuliukensis** Bartsch 1911, Proc. U. S. Nat. Mus., vol. 41, p. 350.

*Reference.* Oldroyd, 1927c, p. 94.

*Type Locality.* U. S. Bur. Fisheries Station 3333, off Iliuliuk Harbor, Alaska.

*Range.* Iliuliuk Harbor, Unalaska, to Belkoffski, Alaska.

**Alvania jan-mayeni** Friele 1877, Nyt. Mag. Naturv., p. 4.

*References.* Verrill, 1882b, p. 524; Whiteaves, 1901a, p. 171; Johnson, 1934, p. 99.

*Type Locality.* Jan Mayen.

*Range.* Gulf of St. Lawrence to off North Carolina, 20 to 500 fms.

**Alvania kyskaensis** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 677.

*Reference.* Oldroyd, 1927c, p. 99.

*Type Locality.* Kyska Harbor, Aleutian Islands, Alaska.

*Range.* Known only from the type locality.

**Alvania latior** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 48.

*References.* Johnson, 1915, p. 118; 1934, p. 99.

*Type Locality.* Casco Bay, Maine.

*Range.* Casco Bay, Maine, from the stomach of a haddock.

**Alvania montereyensis** Bartsch 1911, Proc. U. S. Nat. Mus., vol. 41, p. 343.

*References.* Oldroyd, 1927c, p. 93; Grant and Gale, 1931, p. 768.

*Type Locality.* Monterey, California.

*Range.* Sitka, Alaska, to Monterey, California. Pleistocene of California.

**Alvania multilineata** Stimpson 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 14.

*References.* Whiteaves, 1901a, p. 170; Johnson, 1915, p. 118; 1934, p. 99.

*Type Locality.* "Great Misery Island, and also near Nahant, Massachusetts."

*Range.* Halifax, Nova Scotia, to Cape Cod, Massachusetts; 5 fms.

**Alvania sanjuanensis** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 37.

*Reference.* Oldroyd, 1927c, p. 103.

*Type Locality.* San Juan Islands, Puget Sound, Washington.

*Range.* Puget Sound, Washington.

#### Genus *Cingula* Fleming 1828

**Cingula alaskana** Bartsch 1912, Proc. U. S. Nat. Mus., vol. 41, p. 486.

*Reference.* Oldroyd, 1927c, p. 79.

*Type Locality.* Amchitka Island, Alaska.

*Range.* Known only from the type locality.



**Cingula aleutica** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 307.

*Reference.* Oldroyd, 1927c, p. 80.

*Type Locality.* Unalaska, Alaska.

*Range.* Pribilof Islands to the Aleutians, to Windfall Harbor, Admiralty Island, Alaska. Possible for Arctic Canada.

**Cingula katherinae** Bartsch 1912, Proc. U. S. Nat. Mus., vol. 41, p. 488.

*Reference.* Oldroyd, 1927c, p. 80.

*Type Locality.* Windfall Harbor, Admiralty Island, Alaska.

*Range.* Known only from the type locality. Possible for Arctic Canada.

**Cingula martyni martyni** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 306.

*References.* Oldroyd, 1927c, p. 79; Grant and Gale, 1931, p. 767.

*Type Locality.* Kyska Harbor, Aleutian Islands, Alaska.

*Range.* Bering Strait to Aleutian Islands and Chignik Bay, Alaska. Possible for Arctic Canada. Pliocene of St. George Island, Pribilof group, Alaska.

**Cingula martyni scipio** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 306.

*Reference.* Oldroyd, 1927c, p. 79.

*Type Locality.* Aleutian Islands.

*Range.* Pribilof Islands to the Aleutian Islands and Middleton Island, Alaska. Possible for northern British Columbia.

#### Subgenus *Nodulus* Monterosato 1878

**Cingula asser** Bartsch 1919, Nautilus, vol. 23, p. 138.

*Reference.* Oldroyd, 1927c, p. 82.

*Type Locality.* Port Graham, Alaska.

*Range.* Atka Island, Aleutian Islands, to Cook's Inlet, Alaska. Possible for northern British Columbia.

**Cingula cerinella** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 307.

*Reference.* Oldroyd, 1927c, p. 82.

*Type Locality.* Atka Island, Alaska.

*Range.* Kyska and Amchitka and Atka Islands, Alaska. Possible for northern British Columbia.

**Cingula kyskensis** Bartsch 1911, Proc. U. S. Nat. Mus., vol. 41, p. 291.

*Reference.* Oldroyd, 1927c, p. 83.

*Type Locality.* Kyska Harbor, Aleutian Islands, Alaska.

*Range.* Kyska and Atka Islands, Aleutians, Alaska. Possible for northern British Columbia.

**Cingula palmeri** Dall 1919, Proc. Biol. Soc. Wash., vol. 32, p. 251.

*Reference.* Oldroyd, 1927c, p. 83.

*Type Locality.* St. Paul Island, Bering Sea.

*Range.* Pribilof Islands, Bering Sea. Possible for Arctic Canada.

Genus *Onoba* H. and A. Adams 1854**Onoba aculeus** Gould 1841, Rept. Invert. Mass., 1st ed., p. 266.*References.* Verrill, 1873, p. 654; Whiteaves, 1901a, p. 171; Johnson, 1915, p. 118; 1934, p. 99.*Type Locality.* East Boston, Massachusetts.*Range.* Bay of Fundy to Long Island Sound.Genus *Skeneopsis* Iredale 1915**Skeneopsis alaskana** Dall 1919, Proc. Biol. Soc. Wash., vol. 32, p. 251.*Reference.* Oldroyd, 1927c, p. 84.*Type Locality.* St. Paul Island, Bering Sea.*Range.* Pribilof and Unalaska Islands, Alaska.

## Family RISSOINIDAE

Genus *Rissoina* d'Orbigny 1840**Rissoina newcombei** Dall 1897, Nat. Hist. Soc. Brit. Col., Bull. 2, p. 14.*Reference.* Oldroyd, 1927c, p. 108.*Type Locality.* Cumsheewa Inlet, British Columbia.*Range.* Forrester Island, Alaska, to Vancouver Island, British Columbia.

## Family ANAPLOCAMIDAE

Genus *Anaplocamus* Dall 1895**Anaplocamus borealis** Dall 1895, Proc. U. S. Nat. Mus., vol. 18, p. 9.*Reference.* Oldroyd, 1927c, p. 108.*Type Locality.* Pacific Ocean, south of Unimak Island.*Range.* Known only from the type locality.

## Family SKENEIDAE

Genus *Skenea* Fleming 1828**Skenea planorbis** Fabricius 1780, Fauna Groenl., p. 394.*References.* Verrill, 1873, p. 655; Whiteaves, 1901a, p. 171; Johnson, 1915, p. 119; 1934, p. 100.*Type Locality.* Greenland.*Range.* Greenland to Florida.

## Family LITTORINIDAE

Genus *Littorina* Férussac 1822**Littorina littorea** Linné 1758, Syst. Nat., ed. 10, vol. 1, p. 761.*References.* Gould, 1870, p. 308; Bigelow and Rathbun, 1903, pp. 171-184; Latchford, 1915b, p. 96; Johnson, 1915, p. 120; Hayes, 1929, pp. 413-430; Clench, 1930, p. 105; Colman, 1932, pp. 223-243; Johnson, 1934, p. 101; Moore, 1937, pp. 721-742.*Type Locality.* "O. Europaeo."*Range.* Labrador to New Jersey.

**Littorina obtusata** Linné 1758, Syst. Nat., ed. 10, vol. 1, p. 761.

*References.* Gould, 1870, p. 309; Verrill, 1873, p. 652; Whiteaves, 1901a, p. 172; Johnson, 1934, p. 102; Bequaert, 1943, p. 19.

*Type Locality.* Coast of Lapland.

*Range.* Labrador to New Jersey.

*Synonym.* *L. palliata* Say 1822.

#### Subgenus *Algamorda* Dall 1918

**Littorina castanea** Carpenter 1865, Ann. Mag. Nat. Hist., 3rd ser., vol. 15, p. 28.

*Reference.* Oldroyd, 1927c, p. 63.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

**Littorina subrotundata** Carpenter 1865, Ann. Mag. Nat. Hist., 3rd ser., vol. 15, p. 28.

*Reference.* Oldroyd, 1927c, p. 63.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

#### Section *Algaroda* Dall 1918

**Littorina squalida** Broderip and Sowerby 1829, Zoöl. Jour., vol. 4, p. 370.

*Reference.* Oldroyd, 1927c, p. 59.

*Type Locality.* "Oceano Boreali."

*Range.* Cape York, Arctic Ocean, to Pribilof Islands and the Okhotsk Sea.

#### Section *Littorivaga* Dall 1918

**Littorina aleutica** Dall 1872, Proc. Calif. Acad. Sci., vol. 4, p. 271.

*Reference.* Oldroyd, 1927c, p. 60.

*Type Locality.* Gull Rocks, Akutan Pass, Aleutian Islands.

*Range.* Pribilof Islands and the Aleutians from Kyska to Chika Islands, Alaska.

**Littorina atkana** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 211.

*Reference.* Oldroyd, 1927c, p. 60.

*Type Locality.* Bering Island.

*Range.* Kyska Island, Alaska, to Cook's Inlet.

**Littorina grønlandica** Menke 1830, Synopsis Method. Moll., p. 45.

*References.* Oldroyd, 1927c, p. 61; Johnson, 1934, p. 102.

*Type Locality.* Greenland.

*Range.* Okhotsk and Bering sea coasts and eastward to Sitka, Alaska; Puget Sound; Greenland; circumboreal.

**Littorina planaxis** Philippi 1847, Abbild. Beschreib. neue Conchyl., *Littorina*, pl. 4, fig. 16.

*References.* Oldroyd, 1927c, p. 61; Grant and Gale, 1931, p. 781.

*Type Locality.* "California superior."

*Range.* Puget Sound to Magdalena Bay, Lower California. Guadalupe and Socorro Islands. Pleistocene of California.

**Littorina saxatilis saxatilis** Olivi 1792, Zoöl. Adr., p. 172.

*References.* Gould, 1870, p. 304; Verrill, 1873, p. 651; Whiteaves, 1901a, p. 172; Harmer, 1920-21, p. 655; Oldroyd, 1927c, p. 61; Johnson, 1934, p. 102.

*Type Locality.* Adriatic Sea.

*Range.* Labrador to New Jersey. Aleutian Islands to Puget Sound.

*Synonym.* *L. rudis* Maton 1797, Donovan 1800.

**Littorina saxatilis tenebrosa** Montagu 1803, Test. Brit. 303, t. 20, fig. 4.

*References.* Gould, 1870, p. 306; Johnson, 1934, p. 102.

*Type Locality.* Great Britain.

*Range.* Maine to Massachusetts (Johnson); Halifax to James Bay (Gould).

**Littorina sitchana** Philippi 1845, Proc. Zoöl. Soc. London, 1845, p. 140.

*Reference.* Oldroyd, 1927c, p. 60.

*Type Locality.* Vancouver Island, B.C. ?

*Range.* Southern Bering Sea, both coasts and southward; Puget Sound.

Subgenus *Melarthaphe* "Megerle von Mühlfeld" Menke 1828

**Littorina scutulata** Gould 1849, Proc. Boston Soc. Nat. Hist., vol. 3, p. 83.

*References.* Oldroyd, 1927c, p. 62; Grant and Gale, 1931, p. 782.

*Type Locality.* Puget Sound.

*Range.* Kodiak Island, Alaska, to Turtle Bay and Socorro Island, Lower California.

#### Family LACUNIDAE

#### Genus *Lacuna* Turton 1827

**Lacuna divaricata** Fabricius 1780, Fauna Grönl., p. 392.

*References.* Verrill, 1873, p. 652; Oldroyd, 1927c, p. 66; Grant and Gale, 1931, p. 782; Johnson, 1934, p. 102.

*Type Locality.* Greenland.

*Range.* Norton Sound, Alaska, south to Santa Barbara, California. Circumboreal. Greenland; Labrador. Pliocene, Europe.

*Remarks.* The variety *carinata* Gould is recognized by Grant and Gale as distinct, and *L. solidula* Lovén is also placed here as a variety.

**Lacuna glacialis** Möller 1842, Index Moll. Groenl., p. 9.

*References.* Verrill, 1882b, p. 522; Whiteaves, 1901a, p. 174; Oldroyd, 1927c, p. 65; Johnson, 1934, p. 102.

*Type Locality.* Greenland.

*Range.* St. Paul Island, Alaska; Greenland; north shore of the Gulf of St. Lawrence, 96 fms.

**Lacuna marmorata** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 348.

*Reference.* Oldroyd, 1927c, p. 67.

*Type Locality.* Monterey, California.

*Range.* Saginaw Bay, Alaska, to San Diego, California.

**Lacuna pallidula neritoidea** Gould 1840, Amer. Jour. Sci., vol. 38, p. 197.

*References.* Gould, 1841, p. 263; 1870, p. 303; Verrill, 1873, p. 653; Whiteaves, 1901a, p. 173; Johnson, 1915, p. 122; 1934, p. 102.

*Type Locality.* Chelsea Beach, Massachusetts.

*Range.* Greenland to Connecticut.

**Lacuna porrecta porrecta** Carpenter 1864, Ann. Mag. Nat. Hist., 3rd ser., vol. 14, p. 428.

*References.* Oldroyd, 1927c, p. 64; Grant and Gale, 1931, p. 783.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Commander Islands, Bering Sea, to San Diego, California. Pleistocene of California.

**Lacuna porrecta effusa** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 656.

*Reference.* Oldroyd, 1927c, p. 64.

*Type Locality.* Neah Bay, Washington.

*Range.* Straits of Juan de Fuca to San Francisco, California.

**Lacuna porrecta exaequata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 656.

*Reference.* Oldroyd, 1927c, p. 65.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

**Lacuna solidula** Lovén 1846, Index Moll. Scan., p. 23.

*References.* Grant and Gale, 1931, p. 782; Johnson, 1934, p. 102.

*Type Locality.* Bergen, Norway.

*Range.* Greenland; circumboreal. Puget Sound, Washington, to San Diego, California. Pleistocene of California.

**Lacuna variegata** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 656.

*Reference.* Oldroyd, 1927c, p. 66.

*Type Locality.* Neah Bay, Washington.

*Range.* Neah Bay, Washington, to Monterey, California.

**Lacuna vineta** Montagu 1803, Test. Brit., p. 307.

*References.* Gould, 1870, p. 302; Verrill, 1873, p. 102; Johnson, 1915, p. 122; 1934, p. 102.

*Type Locality.* Salcom Bay, England.

*Range.* Labrador to New Jersey, 1 to 20 fms.

*Synonym.* *L. pretusa* Conrad 1829.

#### Genus *Haloconcha* Dall 1886

**Haloconcha minor** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 350.

*Reference.* Oldroyd, 1927c, p. 68.

*Type Locality.* English Bay, St. Paul Island, Pribilof group, Bering Sea.

*Range.* Commander, Pribilof, and Aleutian Islands, to Chirkoff Island, Alaska.

**Haloconcha reflexa** Dall 1884, Proc. U. S. Nat. Mus., vol. 7, p. 344.

*Reference.* Oldroyd, 1927c, p. 68.

*Type Locality.* Pribilof and Aleutian Islands.

*Range.* Known only from the type locality.

#### Genus *Aquilonaria* Dall 1886

**Aquilonaria turneri** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 204.

*References.* Oldroyd, 1927c, p. 69; Johnson, 1934, p. 103.

*Type Locality.* Labrador's Reef, Ungava Bay.

*Range.* Arctic Ocean near Bering Sea; Labrador.

#### Family FOSSARIDAE

##### Genus *Iselica* Dall 1918

**Iselica fenestrata** Carpenter, Ann. Mag. Nat. Hist., 3rd ser., vol. 14, p. 429.

*References.* Oldroyd, 1927c, p. 70; Grant and Gale, 1931, p. 783.

*Type Locality.* Neah Bay, Washington.

*Range.* Vancouver Island, British Columbia, to Lower California. Pleistocene of California.

**Iselica obtusa laxa** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 351.

*Reference.* Oldroyd, 1927c, p. 71.

*Type Locality.* Maple Bay, Vancouver Island, British Columbia.

*Range.* Vancouver Island, British Columbia, to Puget Sound, Washington.

## Family ?

Genus *Diala* A. Adams 1861***Diala marmorea*** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 657.*References.* Oldroyd, 1927c, p. 78; Grant and Gale, 1931, p. 784.*Type Locality.* Monterey, California.*Range.* Queen Charlotte Islands, British Columbia, to Lower California. Pliocene of California.Genus *Barleeia* Clark 1855***Barleeia oldroydi*** Bartsch 1920, Proc. U. S. Nat. Mus., vol. 58, p. 171.*Reference.* Oldroyd, 1927c, p. 77.*Type Locality.* Monterey Bay, California.*Range.* Mink Bay, Vancouver Island, British Columbia, to Coronado Islands, Lower California.***Barleeia sanjuanensis*** Bartsch 1920, Proc. U. S. Nat. Mus., vol. 58, p. 170.*Reference.* Oldroyd, 1927c, p. 76.*Type Locality.* Puget Sound.*Range.* San Juan Islands, Puget Sound.

## Family TURRITELLIDAE

Genus *Tachyrhynchus* Mörch 1868***Tachyrhynchus erosus erosus*** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 103.*References.* Verrill, 1873, p. 103; Whiteaves, 1901a, p. 174; Johnson 1915, p. 122; Oldroyd, 1927c, p. 56; Johnson, 1934, p. 103.*Type Locality.* Massachusetts Bay.*Range.* Greenland to Massachusetts Bay, 7 to 60 fms.; Arctic Ocean to Kuril Islands, the Aleutians and Kodiak Island.***Tachyrhynchus erosus major*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 346.*Reference.* Oldroyd, 1927c, p. 56.*Type Locality.* Off the Pribilof Islands, Bering Sea, 51 fms.*Range.* Mouth of Colville River, Arctic Alaska, Pribilof and Unimak Islands.***Tachyrhynchus lacteolus lacteolus*** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 62.*Reference.* Oldroyd, 1927c, p. 58.*Type Locality.* Vancouver region.*Range.* Chinik Bay, Alaska peninsula, east and south to Point Abreojos, Lower California.



**Tachyrhynchus lacteolus subplanatus** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 62.

*References.* Oldroyd, 1927c, p. 58; Grant and Gale, 1931, p. 776.

*Type Locality.* Puget Sound, Washington.

*Range.* Puget Sound to San Diego, California. Pleistocene of California.

**Tachyrhynchus pratomus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 347.

*Reference.* Oldroyd, 1927c, p. 57.

*Type Locality.* Semidi Islands, Alaska, Station 1152, 20 fms.

*Range.* Semidi Islands, Alaska, to Lower California.

**Tachyrhynchus reticulatus** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 50.

*References.* Whiteaves, 1901a, p. 174; Oldroyd, 1927c, p. 56; Johnson, 1934, p. 103.

*Type Locality.* Chaleur Bay, Gulf of St. Lawrence.

*Range.* Arctic Ocean and eastern Bering Sea to the Aleutian Islands and British Columbia. Greenland to the Gulf of St. Lawrence, 2 to 15 fms.

#### Genus *Turritellopsis* G. O. Sars 1878

**Turritellopsis acicula acicula** Stimpson 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 15.

*References.* Whiteaves, 1901a, p. 174; Johnson, 1915, p. 123; 1934, p. 103.

*Type Locality.* "From fishes caught off Cape Ann, Massachusetts."

*Range.* Labrador to Massachusetts Bay and Georges Bank, 1 to 50 fms.

**Turritellopsis acicula stimpsoni** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 347.

*References.* Oldroyd, 1927c, p. 59; Grant and Gale, 1931, p. 776.

*Type Locality.* None given.

*Range.* Nunivak Island, Alaska, to San Diego, California. Circumboreal. Upper Pleistocene of California.

#### Family VERMETIDAE

##### Genus *Spiroglyphus* Daudin 1800

**Spiroglyphus lituellus** Mörch 1861, Proc. Zoöl. Soc. London, 1861, p. 154.

*References.* Oldroyd, 1927c, p. 50; Grant and Gale, 1931, p. 778.

*Type Locality.* "Imbedded in the surface of a young *Haliotis*" (Oldroyd).

*Range.* Forrester Island, Alaska, to San Diego, California. Pleistocene of California.

Genus *Petaloconchus* Lea 1843

**Petaloconchus complicatus** Dall 1908, Bull. Mus. Comp. Zoöl., vol. 43, p. 326.

*References.* Oldroyd, 1927c, p. 52; Grant and Gale, 1931, p. 778.

*Type Locality.* Albatross Station 3368, near Cocos Island.

*Range.* Puget Sound to Panama. Pleistocene of Lower California.

Genus *Bivonia* Gray 1850

**Bivonia compacta** Carpenter 1864, Ann. Mag. Nat. Hist., (3) vol. 14, p. 427.

*Reference.* Oldroyd, 1927c, p. 48.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Vancouver Island, British Columbia, to San Pedro, California.

## Family CAECIDAE

Genus *Fartulum* Carpenter 1858

**Fartulum bakeri** Bartsch 1920, Jour. Wash. Acad. Sci., vol. 10, p. 566.

*References.* Oldroyd, 1927c, p. 47; Grant and Gale, 1931, p. 780.

*Type Locality.* San Pedro, California.

*Range.* Ellamar, Alaska, to Mazatlan, Mexico. Upper Pleistocene of Lower California.

**Fartulum occidentale** Bartsch 1920, Jour. Wash. Acad. Sci., vol. 10, p. 566.

*References.* Oldroyd, 1927c, p. 47; Grant and Gale, 1931, p. 780.

*Type Locality.* San Pedro, California.

*Range.* Gulf of Georgia to Lower California. Upper Pleistocene of Lower California.

Genus *Micranellum* Bartsch 1920

**Micranellum barkleyense** Bartsch 1920, Jour. Wash. Acad. Sci., vol. 10, p. 569.

*Reference.* Oldroyd, 1927c, p. 46.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Micranellum oregonense** Bartsch 1920, Jour. Wash. Acad. Sci., vol. 10, p. 569.

*Reference.* Oldroyd, 1927c, p. 46.

*Type Locality.* Forrester Island, Alaska.

*Range.* Forrester Island Alaska, to Monterey, California.

## Family TRICHOTROPIDAE

Genus *Trichotropis* Broderip and Sowerby 1829**Trichotropis bicarinata** Sowerby 1825, Tankerville Catalogue, pl.9.*Reference.* Oldroyd, 1927c, p. 39.*Type Locality.* Bay between Icy Cape and Cape Lisbon, Arctic Ocean, 10 to 15 fms.*Range.* Arctic Ocean.**Trichotropis borealis costellata** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 108.*References.* Whiteaves, 1901a, p. 175; Johnson, 1915, p. 124; Oldroyd, 1927c, p. 40; Johnson, 1934, p. 106.*Type Locality.* Massachusetts Bay, deep water.*Range.* Labrador to Massachusetts Bay, 7 to 60 fms. Arctic Seas, Bering Sea, Aleutians, Queen Charlotte Islands.**Trichotropis cancellata** Hinds 1843, Proc. Zoöl. Soc. London, 1843, p. 17.*Reference.* Oldroyd, 1927c, p. 40.*Type Locality.* Sitka, Alaska.*Range.* Southern part of Bering Sea to Oregon.**Trichotropis conica** Möller 1842, Krøyer's Tidskr. Nat. Hist., vol. 4, p. 85.*References.* Whiteaves, 1901, p. 175; Johnson, 1915, p. 124; Oldroyd, 1927c, p. 39; Johnson, 1934, p. 106.*Type Locality.* Greenland.*Range.* Forrester Island, Alaska; Greenland to the Gulf of Maine, 75 fms.**Trichotropis insignis** Middendorff 1849, Beitr. Malac. Ross., p. 107.*References.* Oldroyd, 1927c, p. 41; Grant and Gale, 1931, p. 767.*Type Locality.* Bering Strait.*Range.* Bering Strait, Aleutian Islands and Cook's Inlet, Alaska. Japan. Pliocene of Alaska.Subgenus *Iphinoë* H. and A. Adams 1854**Trichotropis coronata** Gould 1860, Proc. Boston Soc. Nat. Hist., vol. 7, p. 324.*Reference.* Oldroyd, 1927c, p. 41.*Type Locality.* Straits of Semiavine, Arctic Ocean, 20 fms.*Range.* Arctic Ocean and Bering Sea.**Trichotropis kroyeri** Philippi 1849, Zeitschr. für Malakozoöl., vol. 5, p. 175.*References.* Oldroyd, 1927c, p. 42; Grant and Gale, 1931, p. 767.*Type Locality.* Spitsbergen.*Range.* Arctic and Bering Sea, eastward to Shumagin Islands. Pliocene of St. George Island, Pribilof group, Alaska.

Genus *Torellia* "Lovén" Jeffreys 1867

***Torellia ammonia*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 355.

*Reference.* Oldroyd, 1927c, p. 142.

*Type Locality.* Southwest of Sannakh Island, Alaska, U. S. Fish Comm. Station 3213, 41 fms.

*Range.* Known only from the type locality.

***Torellia fimbriata*** Verrill and Smith 1882, Catalogue Marine Moll. N. Engl., p. 520.

*References.* Johnson, 1915, p. 124; 1934, p. 106.

*Type Locality.* Off the coast of Maine and south of Martha's Vineyard.

*Range.* Gulf of Maine, 52 to 90 fms. South of Martha's Vineyard, 142 to 258 fms.

***Torellia vallonina*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 355.

*Reference.* Oldroyd, 1927c, p. 141.

*Type Locality.* Nazan Bay, Atka Island, Aleutians, 14 fms.

*Range.* Known only from the type locality.

***Torellia vestita*** Jeffreys 1867, Brit. Conch., vol. 4, p. 244.

*References.* Verrill, 1882b, p. 521; Johnson, 1915, p. 125; 1934, p. 106.

*Type Locality.* East coast of Shetland (Barlee).

*Range.* Gulf of Maine, 150 fms. South of Martha's Vineyard, 86 to 146 fms.; Europe.

## Family TRIPHORIDAE

Genus *Triphora* Deshayes 1824

***Triphora carpenteri*** Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 252.

*References.* Oldroyd, 1927b, p. 249; Grant and Gale, 1931, p. 766.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality and the Pleistocene of California, doubtfully.

## Family CERITHIOPSIDAE

Genus *Cerithiopsis* Forbes and Hanley 1849

***Cerithiopsis charlottensis*** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 668.

*Reference.* Oldroyd, 1927b, p. 260.

*Type Locality.* U. S. Bureau Fisheries Station 4205, 60 fms., Queen Charlotte Sound, British Columbia.

*Range.* Queen Charlotte Sound, British Columbia, to Puget Sound, Washington.

**Cerithiopsis paramoea** Bartsch 1911, Proc. U. S. Nat. Mus., vol. 40, p. 356.

*Reference.* Oldroyd, 1927b, p. 259.

*Type Locality.* Neah Bay, Washington.

*Range.* Known only from the type locality.

**Cerithiopsis stejnegeri stejnegeri** Dall 1884, Proc. U. S. Nat. Mus., vol. 7, p. 345.

*Reference.* Oldroyd, 1927b, p. 256.

*Type Locality.* Bering Island.

*Range.* Commander, Aleutian, and Shumagin islands, Alaska.

**Cerithiopsis stejnegeri dina** Bartsch 1911, Proc. U. S. Nat. Mus., vol. 40, p. 343.

*Reference.* Oldroyd, 1927b, p. 257.

*Type Locality.* Sitka, Alaska.

*Range.* Known only from the type locality.

Subgenus *Cerithiopsidella* Bartsch 1911

**Cerithiopsis columna** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 660.

*Reference.* Oldroyd, 1927b, p. 273.

*Type Locality.* Neah Bay, Washington.

*Range.* Vancouver Island, British Columbia, to Monterey Bay, California.

**Cerithiopsis fraseri** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 34.

*Reference.* Oldroyd, 1927b, p. 271.

*Type Locality.* Clayoquot, British Columbia.

*Range.* Clayoquot to Victoria and Nanaimo, British Columbia.

**Cerithiopsis onealensis** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 35.

*Reference.* Oldroyd, 1927b, p. 268.

*Type Locality.* Off O'Neal Island, Puget Sound.

*Range.* Puget Sound.

**Cerithiopsis signa** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 36.

*Reference.* Oldroyd, 1927b, p. 272.

*Type Locality.* Off O'Neal Island, Puget Sound.

*Range.* Puget Sound.

**Cerithiopsis stephensae** Bartsch 1909, Proc. U. S. Nat. Mus., vol. 37, p. 399.

*Reference.* Oldroyd, 1927b, p. 275.

*Type Locality.* Bear Bay, Peril Strait, Alaska.

*Range.* Fort Frederick, Alaska, to Puget Sound.

**Cerithiopsis truncata** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 304.

*Reference.* Oldroyd, 1927b, p. 270.

*Type Locality.* Canals of sponges, Unalaska, Alaska.

*Range.* Unalaska Island, Alaska, to Puget Sound.

**Cerithiopsis willetti** Bartsch 1921, Proc. Biol. Soc. Wash., vol. 34, p. 36.

*Reference.* Oldroyd, 1927b, p. 271.

*Type Locality.* Forrester Island, Alaska.

*Range.* Forrester Island, Alaska, to Puget Sound.

#### Subgenus *Laskeya* Iredale 1918

**Cerithiopsis costulata** Möller 1842, Krøyer's Tidskr., vol. 4, p. 83.

*References.* Verrill, 1882b, p. 526; Whiteaves, 1901a, p. 176; Johnson, 1915, p. 127; 1934, p. 108.

*Type Locality.* Greenland.

*Range.* Greenland to Eastport, Maine.

#### Genus *Cerithiella* Verrill 1882

**Cerithiella whiteavesii** Verrill 1880, Amer. Jour. Sci., vol. 20, pp. 391, 396.

*References.* Verrill, 1882b, p. 522; Whiteaves, 1901a, p. 176; Johnson, 1934, p. 109.

*Type Locality.* None given.

*Range.* Gulf of St. Lawrence, 110 to 200 fms.

#### Family CERITHIIDAE

##### Genus *Bittium* Leach 1847

**Bittium alternatum** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 243.

*References.* Whiteaves, 1901a, p. 175; Johnson, 1915, p. 127; 1934, p. 110.

*Type Locality.* "United States."

*Range.* Prince Edward Island; Massachusetts Bay to North Carolina, on eelgrass.

##### Subgenus *Lirobittium* Bartsch 1911

**Bittium munitum** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 628; Ibid., 1864, p. 660.

*Reference.* Oldroyd, 1927c, p. 33.

*Type Locality.* Neah Bay, Washington.

*Range.* Sitka Sound to Straits of Juan de Fuca.

**Bittium oldroydi** Bartsch 1911, Proc. U. S. Nat. Mus., vol. 40, p. 408.

*Reference.* Oldroyd, 1927c, p. 35.

*Type Locality.* Lower California, in drift.

*Range.* Destruction Island, Washington, to Lower California. Possible for southern British Columbia.

Subgenus *Semibittium* Cossmann 1896

**Bittium attenuatum attenuatum** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 655.

*References.* Oldroyd, 1927c, p. 21; Grant and Gale, 1931, p. 762.

*Type Locality.* Monterey, California.

*Range.* Forrester Island, Alaska, to Lower California. Pleistocene, Lower San Pedro series, California.

**Bittium attenuatum boreale** Bartsch 1911, Proc. U. S. Nat. Mus., vol. 40, p. 395.

*Reference.* Oldroyd, 1927c, p. 22.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Queen Charlotte Islands to Vancouver Island, British Columbia.

**Bittium challisae** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 673.

*Reference.* Oldroyd, 1927c, p. 27.

*Type Locality.* San Juan Island, Washington.

*Range.* Known only from the type locality. Possible for southern British Columbia.

**Bittium sanjuanensis** Bartsch 1917, Proc. U. S. Nat. Mus., vol. 52, p. 674.

*Reference.* Oldroyd, 1927c, p. 28.

*Type Locality.* Off San Juan Island.

*Range.* Puget Sound.

**Bittium vancouverense** Dall and Bartsch 1910, Geol. Surv. Canada, Memoir 14N, p. 19.

*Reference.* Oldroyd, 1927c, p. 20.

*Type Locality.* Ucluelet, Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

Subgenus *Stylidium* Dall 1907

**Bittium eschrichtii eschrichtii** Middendorff 1849, Beitr. Malac. Ross., vol. 2, p. 68.

*References.* Oldroyd, 1927c, p. 18; Grant and Gale, 1931, p. 761.

*Type Locality.* Sitka, Alaska.

*Range.* Sitka, Alaska, to Puget Sound, Washington. Pliocene of Oregon and California; Pleistocene of California.



**Bittium eschrichtii icelum** Bartsch 1907, Proc. U. S. Nat. Mus., vol. 33, p. 178.

*Reference.* Oldroyd, 1927c, p. 19.

*Type Locality.* Neah Bay, Washington.

*Range.* Straits of Juan de Fuca to Monterey, California.

#### Family APORRHAIIDAE

##### Genus *Aporrhais* Dillwyn 1823

**Aporrhais occidentalis occidentalis** Beck 1836, Mag. de Zoöl., vol. 6, Classe 5, pl. 72 and text.

*References.* Whiteaves, 1901a, p. 177; Johnson, 1915, p. 128; 1930, p. 1; 1934, p. 111.

*Type Locality.* Gulf of St. Lawrence and Newfoundland.

*Range.* Gulf of St. Lawrence to off North Carolina, 50 to 350 fms.

**Aporrhais occidentalis labradorensis** Johnson 1930, Nautilus, vol. 44, p. 3.

*Reference.* Johnson, 1934, p. 111.

*Type Locality.* Egg Harbor, Labrador.

*Range.* Labrador, 7 to 60 fms.

**Aporrhais occidentalis mainensis** Johnson 1926, Nautilus, vol. 39, p. 133.

*References.* Johnson, 1930, p. 3; 1934, p. 111.

*Type Locality.* Near Gilpatrick Ledge, off Northeast Harbor, Maine.

*Range.* Digby, Nova Scotia, to Mount Desert, Maine, 5 to 20 fms.

#### Family CYMATIIDAE

##### Genus *Argobuccinum* Klein in Herrmannsen 1846

##### Subgenus *Fusitriton* Cossmann 1903

**Argobuccinum oregonense** Redfield 1848, Annals Lyc. Nat. Hist. N. Y., vol. 4, p. 165.

*References.* Oldroyd, 1927b, p. 242; Grant and Gale, 1931, p. 737; Fenton, 1932, p. 53.

*Type Locality.* Straits of Juan de Fuca.

*Range.* Bering Sea near the Pribilof Islands, south to Japan and to San Nicholas Island, California. Miocene of Oregon; Pliocene of Oregon, Alaska, Japan, and California; Pleistocene of California.

*Remarks.* Referred by Grant and Gale to *Ranella*, subgenus *Priene*.

Order **Stenoglossa**

## Family MURICIDAE

Genus *Acanthina* Fischer 1807Subgenus *Acanthinucella* Cooke 1918

***Acanthina spirata*** Blainville 1832, Nouv. Ann. du Mus., Paris, vol. 1, p. 252.

*References.* Oldroyd, 1927b, p. 47; Grant and Gale, 1931, p. 720.

*Type Locality.* Near Santa Barbara, California.

*Range.* Puget Sound to San Diego, California, and Socorro Island. Pleistocene of California.

Genus *Tritonalia* Fleming 1828

***Tritonalia barbarensis*** Gabb 1866, Proc. Calif. Acad. Sci., vol. 3, p. 183.

*References.* Oldroyd, 1927b, p. 25; Grant and Gale, 1931, p. 709.

*Type Locality.* Catalina Island, California, in 40 fms.

*Range.* British Columbia to Catalina Island, California. Pliocene and Pleistocene of California.

***Tritonalia interfossa interfossa*** Carpenter 1864, Proc. Acad. Nat. Sci. Phila., 1864, p. 64.

*References.* Oldroyd, 1927b, p. 21; Grant and Gale, 1931, p. 710.

*Type Locality.* Not specified.

*Range.* Semidi Islands, Alaska, to California. Miocene? of Oregon; Pliocene of Oregon and California; Pleistocene of California.

***Tritonalia interfossa atropurpurea*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 334.

*Reference.* Oldroyd, 1927b, p. 22.

*Type Locality.* Neah Bay, Washington.

*Range.* Neah Bay, Washington, to San Diego, California.

***Tritonalia fraseri*** I. Oldroyd 1920, Nautilus, vol. 33, p. 136.

*Reference.* Oldroyd, 1927b, p. 25.

*Type Locality.* Brandon Island, Departure Bay, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

***Tritonalia lurida lurida*** Middendorff 1849, Beitr. Malac. Rossica, p. 150.

*References.* Oldroyd, 1927b, p. 16; Grant and Gale, 1931, p. 711.

*Type Locality.* Sitka, Alaska.

*Range.* Forrester Island, Alaska, to Santa Barbara, California. Pliocene and Pleistocene of California.

**Tritonalia lurida aspera** Baird 1863, Proc. Zoöl. Soc. London, 1863, p. 72.

*References.* Oldroyd, 1927b, p. 17; Grant and Gale, 1931, p. 711.

*Type Locality.* Esquimalt Harbour, Vancouver Island, British Columbia.

*Range.* Sitka, Alaska, to San Pedro, California. Pliocene and Pleistocene of California.

**Tritonalia lurida munda** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 663.

*References.* Oldroyd, 1927b, p. 18; Grant and Gale, 1931, p. 712.

*Type Locality.* Not specified.

*Range.* Middleton Island, Alaska, to San Diego, California. Miocene?, Pliocene, and Pleistocene of California.

**Tritonalia painei** Dall 1903, Proc. Biol. Soc. Wash., vol. 16, p. 174.

*Reference.* Oldroyd, 1927b, p. 20.

*Type Locality.* Off Catalina Island, California.

*Range.* Dundas Bay, Alaska, to San Diego, California.

**Tritonalia sclera** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 334.

*Reference.* Oldroyd, 1927b, p. 23.

*Type Locality.* Near Port Townsend, Washington, 20 fms.

*Range.* Coast of Washington to Venice, California.

**Tritonalia tracheia** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 335.

*Reference.* Oldroyd, 1927b, p. 26.

*Type Locality.* Sitka, Alaska, 15 fms.

*Range.* Known only from the type locality.

#### Genus *Trophon* Montfort 1810

##### Subgenus *Boreotrophon* Fischer 1884

**Trophon clathratus** Linné 1767, Syst. Nat., ed. 12, vol. 1, p. 1223.

*References.* Whiteaves, 1901a, p. 178; Johnson, 1915, p. 131; 1934, p. 117.

*Type Locality.* "In Islandiae Mari."

*Range.* Davis Strait to Finmark.

**Trophon clavatus** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 249.

*References.* Verrill, 1884, p. 176; Johnson, 1934, p. 117.

*Type Locality.* Not specified.

*Range.* Off Cape Sable, Nova Scotia, to off Cape Hatteras, North Carolina, 843 to 2,033 fms. Lofoten and west coast of Norway.

**Trophon craticulata** Fabricius 1780, Fauna Groenl., p. 400.

*References.* Hancock, 1846, p. 331; Sars, 1878, p. 248; Verrill, 1882b, p. 513; Posselt, 1898, p. 174; Johnson, 1934, p. 117.

*Type Locality.* Greenland.

*Range.* Hudson Strait to the Newfoundland Banks. Off Halifax, Nova Scotia, 30 to 80 fms.

*Synonyms.* *T. fabricii* Möller 1842; *T. borealis* Reeve 1845.

**Trophon gunneri** Lovén 1846, Öfversigt Kongl. Vet.-Akad. Förh., vol. 3, p. 144.

*References.* Verrill, 1882b, p. 512; Whiteaves, 1901a, p. 178; Johnson, 1915, p. 133; 1934, p. 117.

*Type Locality.* Northern Finmark.

*Range.* Greenland to Massachusetts Bay, 3 to 200 fms. Northern Europe.

**Trophon maclaini** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 538.

*Reference.* Johnson, 1934, p. 117.

*Type Locality.* Off the coast of Greenland.

*Range.* Dredged off Greenland.

**Trophon scalariformis** Gould 1840, Amer. Jour. Sci., vol. 38, p. 197.

*Reference.* Johnson, 1934, p. 117.

*Type Locality.* None given.

*Range.* Labrador to Massachusetts Bay.

*Synonym.* *T. clathrata* auctt., non Linné.

**Trophon truncata** Ström 1767, Norske Vidensk. Selsk. Skr., vol. 4, p. 369.

*References.* Whiteaves, 1901a, p. 177; Johnson, 1915, p. 131; 1934, p. 117.

*Type Locality.* Not specified.

*Range.* Greenland to Georges Bank, 10 to 50 fms.

Section *Trophonopsis* Bucquoy, Dautzenberg and Dollfus 1882

**Trophon kamchatkanus** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 541.

*Reference.* Oldroyd, 1927b, p. 41.

*Type Locality.* U. S. Fish Comm. Station 3644, southeast coast of Kamchatka.

*Range.* Western Bering Sea, 100 fms.

**Trophon tenuisculptus** Carpenter 1866, Ann. Mag. Nat. Hist., 3rd ser., vol. 17, p. 277.

*References.* Oldroyd, 1927b, p. 39; Grant and Gale, 1931, p. 725.

*Type Locality.* Pleistocene? (possibly Upper Pliocene) of Santa Barbara, California.

*Range.* Southeastern Bering Sea to Todos Santos Bay, Lower California. Pleistocene and Pliocene of California. Upper Pliocene? and Pleistocene of California.

**Trophon triphorus** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 545.

*Reference.* Oldroyd, 1927b, p. 40.

*Type Locality.* Albatross Station 3343, off Destruction Island, Washington.

*Range.* Straits of Juan de Fuca to San Diego, California, and off Piedras Blancas, Lower California.

Subgenus *Boreotrophon* Fischer 1884

**Trophon alaskanus** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 545.

*Reference.* Oldroyd, 1927b, p. 34.

*Type Locality.* U. S. Fish Comm. Station 3227, Bering Sea, north of Unalaska; 225 fms.

*Range.* Known only from the type locality.

**Trophon beringi** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 544.

*References.* Oldroyd, 1927b, p. 33; Grant and Gale, 1931, p. 721.

*Type Locality.* Bering Sea.

*Range.* Icy Cape, Arctic Ocean, to Puget Sound; Japan. Pleistocene, Herschel Island, Yukon Territory.

*Synonym.* *T. clathratus* auctt.

**Trophon cepulus** Sowerby 1880, Thesaurus Conchyl., *Trophon*, p. 61.

*Reference.* Oldroyd, 1927b, p. 32.

*Type Locality.* Bering Sea?

*Range.* Bering Sea and Aleutian Islands. Pleistocene of North Japan.

**Trophon cymatus** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 548.

*Reference.* Oldroyd, 1927b, p. 32.

*Type Locality.* Pribilof Islands, Bering Sea.

*Range.* Known only from the type locality.

**Trophon dalli dalli** Kobelt 1878, Conchyl. Cab., 2nd ed., *Trophon*, p. 275.

*Reference.* Oldroyd, 1927b, p. 30.

*Type Locality.* Bering Sea.

*Range.* Arctic Ocean to Straits of Juan de Fuca.

**Trophon dalli alta** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 548.

*Reference.* Oldroyd, 1927b, p. 31.

*Type Locality.* Bering Sea.

*Range.* Bering Sea.

**Trophon disparilis** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 189.

*Reference.* Oldroyd, 1927b, p. 31.

*Type Locality.* Albatross Station 3048, off coast near Gray's Harbour, Washington, 52 fms.

*Range.* Straits of Juan de Fuca to Columbia River entrance.

**Trophon elegantulus** Dall 1907, Smiths. Inst. Misc. Coll., vol. 50, p. 165.

*Reference.* Oldroyd, 1927b, p. 32.

*Type Locality.* Station 4784, 135 fms., off Attu Island, Aleutian Islands.

*Range.* Known only from the type locality.

**Trophon ithitoma** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 337.

*Reference.* Oldroyd, 1927b, p. 33.

*Type Locality.* U. S. Fish Comm. Station 4255, in Taiya Inlet, southeastern Alaska, 253 fms.

*Range.* Lynn Canal, Alaska.

**Trophon macouni** Dall 1919, Geol. Surv. Canada, Mem. 14N, p. 12.

*Reference.* Oldroyd, 1927b, p. 37.

*Type Locality.* Ship Channel, Barkley Sound, Vancouver Island, British Columbia.

*Range.* Port Althorp, Alaska, to Barkley Sound, British Columbia.

**Trophon multicostatus** Eschscholtz 1829, Zoöl. Atlas, part 2, p. 11, pl. 9, fig. 4.

*References.* Oldroyd, 1927b, p. 33; Grant and Gale, 1931, p. 722.

*Type Locality.* Sitka, Alaska.

*Range.* Nunivak Island, Bering Sea, to San Pedro, California. Japan. Pliocene and Pleistocene of California.

**Trophon orpheus** Gould 1849, Proc. Boston Soc. Nat. Hist., vol. 3, p. 142.

*References.* Oldroyd, 1927b, p. 37; Grant and Gale, 1931, p. 722.

*Type Locality.* Puget Sound.

*Range.* Victoria, British Columbia, and off the Columbia River, Oregon. Pliocene and Pleistocene of California.

**Trophon pacificus** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 544.

*References.* Oldroyd, 1927b, p. 35; Grant and Gale, 1931, p. 723.

*Type Locality.* Bering Sea?

*Range.* Arctic Ocean to Kamchatka and south to Acapulco, Mexico. Pleistocene of California.

**Trophon rotundatus** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 547.

*Reference.* Oldroyd, 1927b, p. 29.

*Type Locality.* Bering Sea, southeast from the Pribilof Islands, 74 fms.

*Range.* Known only from the type locality.

**Trophon scitulus** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 188.

*Reference.* Oldroyd, 1927b, p. 31.

*Type Locality.* Albatross Station 3227, off coast of Unalaska Island, Bering Sea, 225 fms.

*Range.* Pribilof Islands to Unalaska Island, Bering Sea.

**Trophon smithi** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 542.

*Reference.* Oldroyd, 1927b, p. 38.

*Type Locality.* None given.

*Range.* Pribilof Islands, Bering Sea, to Santa Barbara, California.

**Trophon staphylinus** Dall 1902, Proc. U. S. Nat. Mus., vol. 56, p. 338.

*Reference.* Oldroyd, 1927b, p. 36.

*Type Locality.* U. S. Fish Comm. Station 4415, off Santa Barbara Island, California.

*Range.* Sitka, Alaska, to Coronado Islands, Lower California.

**Trophon stuarti** E. A. Smith 1880, Proc. Zool. Soc. London, 1880, p. 481.

*References.* Oldroyd, 1927b, p. 38; Grant and Gale, 1931, p. 724.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Shumagin Islands, Alaska, to San Diego, California. Pliocene and Pleistocene of California.

#### Genus *Urosalpinx* Stimpson 1865

**Urosalpinx cinereus** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 236.

*References.* Verrill, 1873, p. 641; Whiteaves, 1901a, p. 177; Johnson, 1915, p. 132; 1928, p. 68; 1934, p. 117.

*Type Locality.* "Inhabits the estuaries of the United States."

*Range.* Prince Edward Island to Florida.

#### Family THAISIDAE

##### Genus *Thais* Bolten 1798

**Thais foliata** Martyn 1784, Figs. of Nondescr. Shells, table 2, pl. 66.

*References.* Oldroyd, 1927b, p. 14; Grant and Gale, 1931, p. 705.

*Type Locality.* Sitka, Alaska.

*Range.* Sitka, Alaska, to San Diego, California. Miocene of Oregon and Washington, Pleistocene of California.

##### Subgenus *Nucella* Bolten 1798

**Thais canaliculata** Duclos 1832, Ann. des Sci. Nat., vol. 26, p. 104.

*Reference.* Oldroyd, 1927b, p. 46.

*Type Locality.* California.

*Range.* Whole Aleutian chain, eastward to Sitka and southward to Monterey, California.



**Thais emarginata emarginata** Deshayes 1839, Rev. Zoöl. Soc. Cuv., p. 360.

*References.* Oldroyd, 1927b, p. 44; Grant and Gale, 1931, p. 718.

*Type Locality.* California.

*Range.* Bering Island and the Okhotsk Sea on the west; on the east from Hagemeister Island and Bering Sea, south of the winter floe-line, and southeastward to California and Mexico.

**Thais emarginata projecta** Dall 1915, Proc. U. S. Nat. Mus., vol. 49, p. 571.

*Reference.* Oldroyd, 1927b, p. 45.

*Type Locality.* Sitka, Alaska.

*Range.* Sitka, Alaska, to Puget Sound, Washington.

**Thais lamellosa lamellosa** Gmelin 1792, Systema Naturae, vol. 7, p. 3498.

*References.* Oldroyd, 1927b, p. 42; Grant and Gale, 1931, p. 716.

*Type Locality.* ?

*Range.* Port Clarence, Bering Strait, and southward on the west to Sado Island, Japan Sea; on the east to the Aleutian Islands and Santa Barbara, California. Upper Miocene of California; Pliocene and Pleistocene of California and Oregon.

**Thais lamellosa cymica** Dall 1915, Proc. U. S. Nat. Mus., vol. 49, p. 565.

*Reference.* Oldroyd, 1927b, p. 43.

*Type Locality.* Rocks exposed to the surf, coast of Washington.

*Range.* Known only from the type locality.

**Thais lamellosa hormica** Dall 1915, Proc. U. S. Nat. Mus., vol. 49, p. 565.

*Reference.* Oldroyd, 1927b, p. 43.

*Type Locality.* Inner part of Sitka Harbour.

*Range.* Sitka, Alaska, to Puget Sound.

**Thais lamellosa neptunea** Dall 1915, Proc. U. S. Nat. Mus., vol. 49, p. 565.

*Reference.* Oldroyd, 1927b, p. 43.

*Type Locality.* Cook's Inlet, Alaska.

*Range.* Known only from the type locality.

**Thais lamellosa sitkana** Dall 1915, Proc. U. S. Nat. Mus., vol. 49, p. 566.

*Reference.* Oldroyd, 1927b, p. 44.

*Type Locality.* Inner harbour of Sitka, Alaska.

*Range.* Known only from the type locality.

**Thais lapilla lapilla** Linné 1758, Syst. Nat., ed. 10, vol. 1, p. 739.

*References.* Verrill, 1873, p. 115; Bigelow and Conant, 1901, pp. 361-362; Dubois, 1903, pp. 117-118; Johnson, 1915, p. 132; Colton, 1922, pp. 146-157; Agersborg, 1929, p. 45; Johnson, 1934, p. 118.

*Type Locality.* "Ad Oceani Europaei Littora."

*Range.* Newfoundland to Connecticut; Europe.

**Thais lapilla imbricata** Lamarck 1822, Anim. sans Vertèbres, vol. 7, p. 244.

*Reference.* Johnson, 1934, p. 118.

*Type Locality.* "Mers d'Europe."

*Range.* Maine to Massachusetts; Europe.

**Thais lima** Martyn 1784, Univ. Conchol., Figs. Nondescr. Shells, table 2, pl. 46.

*References.* Oldroyd, 1927b, p. 44; Grant and Gale, 1931, p. 717.

*Type Locality.* King George's Sound.

*Range.* Kotzebue Sound, Arctic Ocean, to Bering Strait; Aleutian Islands to Cedros Island, Lower California. Japan. Miocene, Pliocene, and Pleistocene of California.

#### Family CORALLIOPHILIDAE

Genus *Coralliophila* H. & A. Adams 1853

Subgenus *Pseudomurex* Monterosato 1872

**Coralliophila kincaidi** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 339.

*Reference.* Oldroyd, 1927b, p. 50.

*Type Locality.* Puget Sound, Washington.

*Range.* Known only from the type locality.

#### Family PYRENIDAE

Genus *Mitrella* Risso 1826

**Mitrella amiantis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 331.

*Reference.* Oldroyd, 1927a, p. 275.

*Type Locality.* Beach at Kiska Harbour, Aleutians, Station 1026.

*Range.* Known only from the type locality.

**Mitrella gouldi** Carpenter 1856, Proc. Zoöl. Soc. London, 1856, p. 208.

*References.* Oldroyd, 1927a, p. 277; Grant and Gale, 1931, p. 695.

*Type Locality.* Santa Barbara, California.

*Range.* Kodiak, Alaska, to San Diego, California. Pliocene and Pleistocene of California.

*Synonym.* *N. dalli* E. A. Smith.

**Mitrella hypodra** Dall 1916, Nautilus, vol. 30, p. 27.

*References.* Stearns, 1871, Conchol. Mem., No. 12, p. 5 (original description of *Astyris variegata*); Oldroyd, 1927a, p. 276.

*Type Locality.* San Diego, California.

*Range.* Puget Sound to Mexico.

*Synonym.* *Astyris variegata* Stearns non Menke 1828.

**Mitrella lunata** Say 1826, Jour. Acad. Nat. Sci., Phila., vol. 5, p. 213.

*References.* Whiteaves, 1901a, p. 180; Johnson, 1915, p. 133; 1934, p. 120.

*Type Locality.* Southern States.

*Range.* Prince Edward Island to the Gulf of Mexico.

**Mitrella luculenta** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 331.

*Reference.* Oldroyd, 1927a, p. 277.

*Type Locality.* U. S. Fish Comm. Station 3180, in the Gulf of the Farallones, off San Francisco, California, 24 fms.

*Range.* Straits of Juan de Fuca to Coronado Islands.

**Mitrella permodesta** Dall 1890, Proc. U. S. Nat. Mus., vol. 12, p. 327.

*Reference.* Oldroyd, 1927a, p. 275.

*Type Locality.* Station 2807, near the Galapagos Islands.

*Range.* Unalaska, Aleutian Islands, to San Diego, California, south to Galapagos Islands.

**Mitrella rosacea** Gould 1840, Amer. Jour. Sci., vol. 38, p. 197.

*References.* Whiteaves, 1901a, p. 179; Oldroyd, 1927a, p. 274; Johnson, 1934, p. 120.

*Type Locality.* Off Cohasset, Massachusetts.

*Range.* Icy Cape, Arctic Ocean, to Pearl Straits, Alaska. Circumboreal. Labrador to New Jersey, 3 to 60 fms.

**Mitrella tuberosa tuberosa** Carpenter 1865, Ann. Mag. Nat. Hist., (3) vol. 15, p. 398.

*References.* Oldroyd, 1927a, p. 271; Grant and Gale, 1931, p. 697.

*Type Locality.* Santa Barbara, California.

*Range.* Forrester Island, Alaska, to Gulf of California. Miocene, Pliocene, and Pleistocene of California.

**Mitrella tuberosa major** T. S. Oldroyd 1924, Proc. U. S. Nat. Mus., vol. 65, p. 24.

*References.* Oldroyd, 1927a, p. 272; Grant and Gale, 1931, p. 697.

*Type Locality.* Lower San Pedro, Nob Hill cut, San Pedro, California.

*Range.* Banks Island, British Columbia. Pleistocene, Lower San Pedro, Nob Hill cut, San Pedro, California.

*Remarks.* Grant and Gale recognize this only as a northern form and note that the name is preoccupied.

**Mitrella zonalis zonalis** 'Linsley' Gould 1848, Amer. Jour. Sci., 2nd ser., vol. 6, p. 236.

*References.* Whiteaves, 1901a, p. 180; Johnson, 1915, p. 133; 1934, p. 120.

*Type Locality.* Connecticut.

*Range.* Eastport, Maine, to Connecticut, 10 to 60 fms.

**Mitrella zonalis dissimilis** Stimpson 1851, Proc. Boston Soc. Nat. Hist., vol. 4, p. 114.

*References.* Johnson, 1915, p. 133; 1934, p. 120.

*Type Locality.* Bay of Fundy.

*Range.* Grand Manan, 8 fms. Penobscot Bay, Maine.

Subgenus *Alia* H. and A. Adams 1853

**Mitrella carinata californiana** Gaskoin 1852, Proc. Zoöl. Soc. London, 1852, p. 12.

*References.* Oldroyd, 1927a, p. 273; Grant and Gale, 1931, p. 693.

*Type Locality.* San Diego, California.

*Range.* Forrester Island, Alaska, to Salina Cruz, Mexico.

*Remarks.* A synonym of *M. carinata gausapata* according to Grant and Gale.

**Mitrella gausapata** Gould 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 170.

*References.* Oldroyd, 1927a, p. 273; Grant and Gale, 1931, p. 694.

*Type Locality.* Puget Sound.

*Range.* Port Etches, Alaska, to Salina Cruz, Mexico. Miocene of Washington, Pliocene of Oregon and California, Pleistocene of California.

*Remarks.* A variety of *Mitrella carinata* Hinds according to Grant and Gale.

Genus *Anachis* H. and A. Adams 1853

**Anachis haliaeeti** Jeffreys 1867, Brit. Conch., vol. 4, p. 356.

*References.* Whiteaves, 1901a, p. 180; Johnson, 1915, p. 133; 1934, p. 119.

*Type Locality.* "In 85-95 f. about 25 miles NNW of Unst."

*Range.* Off Halifax, Nova Scotia, 95 fms.; Gulf of Maine, 30 to 114 fms.; off Massachusetts, 67 to 506 fms., to North Carolina, 30 to 640 fms.

Genus *Amphissa* H. and A. Adams 1853

**Amphissa columbiana** Dall 1916, Nautilus, vol. 30, p. 27.

*References.* Oldroyd, 1927a, p. 280; Grant and Gale, 1931, p. 701.

*Type Locality.* Puget Sound.

*Range.* Chiachi Islands, Alaska, to San Pedro, California. Pliocene and Pleistocene of California.

**Amphissa reticulata** Dall 1916, Nautilus, vol. 30, p. 27.

*Reference.* Oldroyd, 1927a, p. 283.

*Type Locality.* None given.

*Range.* Port Althorp, Alaska, to San Diego, California.

## Family NASSARIIDAE

Genus *Nassarius* Duméril 1805Subgenus *Ilyanassa* Stimpson 1865**Nassarius obsoletus** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 232.*References.* Whiteaves, 1901a, p. 181; Dall, 1907, p. 91; Batchelder, 1915, p. 43; Johnson, 1915, p. 135; 1934, p. 122; Morgan, 1937, pp. 88-98.*Type Locality.* "Coast of the United States."*Range.* South shore of the Gulf of St. Lawrence to Florida. San Francisco, California, introduced.Subgenus *Schizopyga* Conrad 1850**Nassarius cooperi** Forbes 1850, Proc. Zoöl. Soc. London, 1850, p. 273.*References.* Oldroyd, 1927a, p. 265; Grant and Gale, 1931, p. 675.*Type Locality.* Sandwich Islands?*Range.* Puget Sound to San Diego, California. Miocene, Pliocene, and Pleistocene of California.*Remarks.* A variety of *N. mendicus* according to Grant and Gale.**Nassarius fossatus** Gould 1849, Proc. Boston Soc. Nat. Hist., vol. 3, p. 152.*References.* Oldroyd, 1927a, p. 264; Grant and Gale, 1931, p. 675.*Type Locality.* Puget Sound at the mouth of the Columbia River.*Range.* Vancouver Island, British Columbia, to Cerros Island, Lower California. Miocene, Pliocene, and Pleistocene of California.**Nassarius mendicus** Gould 1849, Proc. Boston Soc. Nat. Hist., vol. 3, p. 155.*References.* Oldroyd, 1927a, p. 265; Grant and Gale, 1931, p. 674.*Type Locality.* Nisqually, Port Discovery, Puget Sound.*Range.* Kodiak Island, Alaska, to Magdalena Bay, Lower California. Miocene of Oregon and California; Pliocene and Pleistocene of California.**Nassarius perpinguis** Hinds 1844, Zoöl. Voy. of H.M.S. *Sulphur*, p. 36.*References.* Oldroyd, 1927a, p. 266; Grant and Gale, 1931, p. 673.*Type Locality.* Magdalena Bay, Lower California.*Range.* Puget Sound to Cerros Island, Lower California. Pleistocene, Pliocene, and Miocene of California.Subgenus *Tritia* H. and A. Adams 1856**Nassarius trivittatus** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 231.*References.* Johnson, 1915, p. 135; 1934, p. 122.*Type Locality.* "Middle and southern States."*Range.* South shore of the Gulf of St. Lawrence to Florida.

## Family BUCCINIDAE

Genus *Buccinum* Linné 1767

***Buccinum abyssorum*** Verrill and Smith 1884, Trans. Conn. Acad., vol. 6, p. 167.

*Reference.* Johnson, 1934, p. 123.

*Type Locality.* Not specified.

*Range.* N. 40° lat. to off North Carolina, 49 to 1,434 fms.

***Buccinum aleuticum*** Dall 1894, Proc. U. S. Nat. Mus., vol. 17, p. 706.

*Reference.* Oldroyd, 1927a, p. 260.

*Type Locality.* Station 3219, south of Unimak Island, Aleutians.

*Range.* Known only from the type locality. Possible for northern British Columbia.

***Buccinum amaliae*** Verkrüzen 1878, Jahrb. Deutsch. Malak. Gesells., vol. 5, p. 218.

*Reference.* Posselt, 1898, p. 198.

*Type Locality.* Newfoundland.

*Range.* West Greenland; Newfoundland.

***Buccinum angulosum angulosum*** Gray 1839, Beechey's Voyage, Zoöl., p. 127.

*Reference.* Oldroyd, 1927a, p. 255.

*Type Locality.* "Icy Cape."

*Range.* Bernard Harbour, Arctic Coast, to Point Barrow and vicinity of Bering Strait, Alaska.

***Buccinum angulosum cnismatopleura*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 328.

*Reference.* Oldroyd, 1927a, p. 255.

*Type Locality.* Point Barrow, Arctic Coast of Alaska.

*Range.* Known only from the type locality. Possible for the Arctic Coast of Canada.

***Buccinum angulosum normale*** Dall 1885, in Ray, Polar Exped. to Point Barrow, Report, p. 179.

*References.* Dall, 1919b, pp. 6, 12; Oldroyd, 1927a, p. 255; Grant and Gale, 1931, p. 668.

*Type Locality.* Cape Smythe.

*Range.* Arctic Ocean from Point Barrow and Dolphin and Union Strait to Kotzebue Sound. Pleistocene of Alaska.

***Buccinum angulosum subcostatum*** Dall 1885, in Ray, Polar Exped. to Point Barrow, Report, p. 179.

*Reference.* Oldroyd, 1927a, p. 256.

*Type Locality.* Point Barrow, Arctic Ocean.

*Range.* Known only from the type locality. Possible for Arctic Coast of Canada.



**Buccinum angulosum transliratum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 328.

*Reference.* Oldroyd, 1927a, p. 256.

*Type Locality.* Point Belcher, Arctic Coast of Alaska.

*Range.* Point Barrow, to Bristol Bay, Alaska.

**Buccinum baeri baeri** Middendorff 1848, Beitr. Malac. Ross., vol. 2, p. 148.

*Reference.* Oldroyd, 1927a, p. 257.

*Type Locality.* Bering Sea.

*Range.* Commander, Aleutian, and Kodiak islands, Alaska. Possible for northern British Columbia.

**Buccinum baeri mörchianum** Fischer 1858, Jour. de Conchyl., vol. 7, p. 299.

*References.* Oldroyd, 1927a, p. 258; Willett, 1937, pp. 101-102.

*Type Locality.* Siberia.

*Range.* Bering Sea, Kodiak, Forrester Islands, Alaska, and Port Simpson, British Columbia.

*Remarks.* The variety is not tenable according to Willett (1937).

**Buccinum belcheri** Reeve 1855, Last of the Arctic Voyages, p. 394.

*References.* Posselt, 1898, p. 194; Johnson, 1934, p. 123.

*Type Locality.* Port Refuge, Arctic Canada.

*Range.* Arctic Canada; Etah, Greenland; Jan Mayen; Finmark.

**Buccinum bulimuloideum** Dall 1907, Smiths. Inst. Misc. Coll., vol. 50, p. 150.

*Reference.* Oldroyd, 1927a, p. 248.

*Type Locality.* Station 2853, southeast of Alaska Peninsula.

*Range.* Near Shumagin Islands, Alaska, 159 fms.

**Buccinum castaneum castaneum** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 3.

*Reference.* Oldroyd, 1927a, p. 249.

*Type Locality.* Shumagin Islands, 20 fms.

*Range.* Sannak and Shumagin Islands, 20 to 41 fms.

**Buccinum castaneum fluctuatum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 327.

*Reference.* Oldroyd, 1927a, p. 250.

*Type Locality.* St. George Island, Bering Sea.

*Range.* Pribilof Islands to Unimak Pass and the Shumagin Islands, Alaska.

**Buccinum castaneum incisulum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 327.

*Reference.* Oldroyd, 1927a, p. 250.

*Type Locality.* Unimak Pass, Aleutian Islands.

*Range.* Western Bering Sea. Possible for Arctic Canada.



**Buccinum castaneum triplostephanum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 327.

*Reference.* Oldroyd, 1927a, p. 250.

*Type Locality.* Aleutian Islands, Alaska.

*Range.* Kyska and Amchitka Islands, Aleutian Islands, Alaska.

**Buccinum chartium** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 325.

*Reference.* Oldroyd, 1927a, p. 243.

*Type Locality.* U. S. Bur. Fisheries Station 3709, off Honshu Island, Japan Sea, 260 fms.

*Range.* Pribilof Islands, Alaska, 688 fms., to Japan. Possible for northern British Columbia.

**Buccinum chishimanum** Pilsbry 1904, Nautilus, vol. 18, p. 87.

*Reference.* Oldroyd, 1927a, p. 260.

*Type Locality.* Etoro, Chishima, Kuril Islands, Japan.

*Range.* Bering Island, Bering Sea, to Japan. Possible for northern British Columbia.

**Buccinum ciliatum** Fabricius 1780, Fauna Grönl., p. 401.

*References.* Verrill, 1882b, p. 498; Whiteaves, 1901a, p. 185; Oldroyd, 1927a, p. 259; Johnson, 1934, p. 123.

*Type Locality.* "Arctic."

*Range.* Circumboreal. Point Barrow, Arctic Ocean, to Aleutian and Shumagin Islands. Greenland to the Newfoundland Banks, 3 to 112 fms.

**Buccinum cnismatum** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 143.

*Reference.* Oldroyd, 1927a, p. 247.

*Type Locality.* Station 3331, in Bering Sea, north of Unalaska.

*Range.* Bering Sea, north of Unalaska, 300 fms.

**Buccinum cyaneum cyaneum** Bruguière 1792, Encycl. Méthod., Hist. Nat. des Vers, vol. 1, p. 266.

*References.* Hancock, 1846, p. 328; Verrill, 1882b, p. 492; Whiteaves, 1901a, p. 183; Johnson, 1915, p. 135; 1934, p. 122.

*Type Locality.* "Côtes du Groenland."

*Range.* Labrador to Cape Cod, Massachusetts, 26 to 471 fms.

**Buccinum cyaneum patulum** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 260.

*References.* Verrill, 1882b, p. 492; Posselt, 1898, p. 200; Whiteaves, 1901a, p. 184.

*Type Locality.* Not specified.

*Range.* Greenland to the Gulf of St. Lawrence.

**Buccinum cyaneum perdix** "Beck" Mörch 1869, Fauna Moll. Islandiae, p. 211.

*References.* Verrill, 1882b, p. 492; Whiteaves, 1901a, p. 184; Johnson, 1915, p. 136; 1934, p. 122.

*Type Locality.* Iceland.

*Range.* Greenland south to Nova Scotia and Cape Cod, Massachusetts, 70 to 90 fms.; Iceland, Spitsbergen, Norway.

**Buccinum diplodetum** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 143.

*Reference.* Oldroyd, 1927a, p. 247.

*Type Locality.* Station 3074, off Sea Lion Rock, coast of Washington.

*Range.* Off Sitka, Alaska, 1,569 fms. to Sea Lion Rock, Washington, 877 fms.

**Buccinum donovani** Gray 1839, Zoöl. Beechey's Voyage, p. 128.

*References.* Whiteaves, 1901a, p. 187; Harmer, 1914-19, p. 107; Johnson, 1934, p. 122.

*Type Locality.* Arctic Ocean.

*Range.* Labrador, Gulf of St. Lawrence, and Grand Banks, 7 to 110 fms.

**Buccinum ekblawi** Baker 1919, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 512.

*Reference.* Johnson, 1934, p. 122.

*Type Locality.* Etah and Peeawahto Point, Greenland.

*Range.* Known only from the type locality.

**Buccinum elongatum** Verkrüzen 1881, Jahrb. Deutsch. Malak. Gesells., vol. 8, p. 90.

*References.* Posselt, 1898, p. 198; Harmer, 1914-19, p. 110.

*Type Locality.* Newfoundland.

*Range.* Newfoundland and West Greenland.

**Buccinum eugrammatum** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 153.

*Reference.* Oldroyd, 1927a, p. 240.

*Type Locality.* Station 4777, Petrel Bank, Bering Sea.

*Range.* Petrel Bank, Bering Sea, 42 to 54 fms.

**Buccinum fischerianum** Dall 1871, Amer. Jour. Conch., vol. 7, p. 106.

*Reference.* Oldroyd, 1927a, p. 258.

*Type Locality.* St. George Island, Pribilof group, Bering Sea.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Buccinum fringillum** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 9.

*Reference.* Oldroyd, 1927a, p. 256.

*Type Locality.* Arctic Ocean, near Icy Cape.

*Range.* North end of Nunivak Island, Bering Sea.

**Buccinum glaciale glaciale** Linné 1761, Fauna Suecica, 2nd ed., p. 523.

*References.* Whiteaves, 1901a, p. 186; Oldroyd, 1927a, p. 238; Grant and Gale, 1931, p. 667; Johnson, 1934, p. 123.

*Type Locality.* Northern Sea.

*Range.* Arctic Ocean, circumboreal. On the west coast, south to Straits of Juan de Fuca; on the east coast, Greenland to Gulf of St. Lawrence. Pleistocene of Alaska.

**Buccinum glaciale parallelum** Dall 1919, Proc. U. S. Nat. Mus., vol. 54, p. 231.

*References.* Oldroyd, 1927a, p. 239; Grant and Gale, 1931, p. 668.

*Type Locality.* Bering Sea.

*Range.* Pribilof and Aleutian Islands to Cook's Inlet. Kuril Islands, Japan. Late Pliocene of St. George Island, Pribilof Islands.

**Buccinum gouldii** Verrill 1882, Catalogue Marine Moll. N. Engl., p. 497.

*References.* Whiteaves, 1901a, p. 185; Johnson, 1934, p. 122.

*Type Locality.* None designated.

*Range.* Grand Banks (Gould). La Have Bank, 60 fms. (Verrill).

**Buccinum groenlandicum** Hancock 1846, Ann. Mag. Nat. Hist., vol. 18, p. 329.

*Reference.* Johnson, 1934, p. 122.

*Type Locality.* West Coast of Davis Straits.

*Range.* Labrador, 60 fms. Davis Straits.

**Buccinum humphreysianum** Bennett 1825, Zoöl. Jour., vol. 1, p. 398.

*References.* Verrill, 1882b, p. 497; Oldroyd, 1927a, p. 242; Johnson, 1934, p. 122.

*Type Locality.* Harbour of Cork, Ireland.

*Range.* "Northwest America" (Pease); exotic?—Labrador, 60 fms., Greenland. Circumboreal (Johnson).

**Buccinum hydrophanum** Hancock 1846, Ann. Mag. Nat. Hist., vol. 18, p. 325.

*References.* Posselt, 1898, p. 207; Johnson, 1934, p. 122.

*Type Locality.* West Coast of Davis Straits.

*Range.* Labrador to Grand Banks, 60 fms.

**Buccinum inexhaustum** Verkrüzen 1881, Jahrb. Deutsch. Malak. Gesells., vol. 8, p. 297.

*Reference.* Johnson, 1934, p. 123.

*Type Locality.* Grand Banks of Newfoundland.

*Range.* Newfoundland.

**Buccinum kadiakense** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 147.

*Reference.* Oldroyd, 1927a, p. 248.

*Type Locality.* Kodiak Island, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Buccinum meridionale** (Verkrüzen MSS.) Harmer 1914, Plioc. Moll. G. B., vol. 1, p. 111.

*Type Locality.* Newfoundland.

*Range.* Banks of Newfoundland, southern part.

**Buccinum ochotense** Middendorff 1848, Sibirische Reise, p. 235.

*Reference.* Oldroyd, 1927a, p. 251.

*Type Locality.* Arctic.

*Range.* Arctic Ocean north of Bering Strait, and the Okhotsk Sea. Possible for the Arctic waters of Canada.

**Buccinum oedematum** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 145.

*Reference.* Oldroyd, 1927a, p. 242.

*Type Locality.* Station 3502, near Pribilof Islands, Alaska, 368 fms.

*Range.* Pribilof and Sannak Islands, Alaska, to Tahwit Head, Washington.

**Buccinum ovulum** Dall 1894, Proc. U. S. Nat. Mus., vol. 17, p. 707.

*Reference.* Oldroyd, 1927a, p. 260.

*Type Locality.* Station near Amukhta Pass, Aleutians, 248 fms.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Buccinum pemphigus pemphigus** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 151.

*Reference.* Oldroyd, 1927a, p. 244.

*Type Locality.* Station 4797, off Dalnoi Point, Kamchatka, 682 fms.

*Range.* Western Bering Sea. Possible for Alaska and northern British Columbia.

**Buccinum pemphigus major** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 325.

*Reference.* Oldroyd, 1927a, p. 245.

*Type Locality.* U. S. Fish Comm. Station 3643, western Bering Sea.

*Range.* Western Bering Sea and south to Japan. Possible for Alaska and northern British Columbia.

**Buccinum pemphigus orotundum** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 152.

*Reference.* Oldroyd, 1927a, p. 245.

*Type Locality.* Station 3254, north of Unimak island, Bering Sea.

*Range.* Nunivak Island, Pribilof and Unimak islands, Bering Sea. Possible for northern British Columbia.

**Buccinum percrassum** Dall 1881, Proc. U. S. Nat. Mus., vol. 9, p. 216.

*References.* Posselt, 1898, p. 195; Oldroyd, 1927a, p. 261.

*Type Locality.* Bering Island.

*Range.* Arctic Ocean north of Bering Sea.

**Buccinum physematum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 328.

*Reference.* Oldroyd, 1927a, p. 254.

*Type Locality.* U. S. Fish Comm. Station 3253, Bering Sea.

*Range.* Bernard Harbour, Arctic coast of Canada, to Point Barrow and Bristol Bay, Alaska.

**Buccinum picturatum** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 8.

*Reference.* Oldroyd, 1927a, p. 250.

*Type Locality.* Aleutian Islands.

*Range.* Aleutian Islands eastward to Bristol Bay and Kodiak Island, Alaska.

**Buccinum planeticum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 326.

*Reference.* Oldroyd, 1927a, p. 246.

*Type Locality.* U. S. Fish Comm. Station 3305, southwest of Hagemeister Island, Bering Sea.

*Range.* Pribilof Island, Bering Sea, to Queen Charlotte Islands, British Columbia.

**Buccinum plectrum** Stimpson 1865, Can. Nat. and Jour. of Sci., vol. 2, N. S., p. 374.

*References.* Oldroyd, 1927a, p. 239; Grant and Gale, 1931, p. 668; Johnson, 1934, p. 123.

*Type Locality.* Arctic Ocean, north of Bering Straits.

*Range.* Point Barrow, Arctic Ocean, south to Puget Sound. Circumboreal. Greenland to the Gulf of St. Lawrence. Miocene of St. Paul, Unalaska, and Unga Island.

**Buccinum polare** Gray 1839, Beechey's Voyage, Zoölogy, p. 123.

*References.* Oldroyd, 1927a, p. 243; Grant and Gale, 1931, p. 668.

*Type Locality.* Icy Cape, Arctic.

*Range.* Arctic Ocean to Bering Sea; Alaska. Pleistocene of Alaska.

**Buccinum rondinum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 326.

*Reference.* Oldroyd, 1927a, p. 249.

*Type Locality.* U. S. Fish Comm. Station 2853, off Alaska Peninsula.

*Range.* Southeastern Bering Sea, off Alaska Peninsula, 159 fms.

**Buccinum rossellinum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 327.

*Reference.* Oldroyd, 1927a, p. 252.

*Type Locality.* U. S. Fish Comm. Station 3340, southeast of Chirikoff Island, Alaska, 695 fms.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Buccinum sandersoni** Verrill 1882, Catalogue Marine Moll. N. Engl., p. 490.

*References.* Johnson, 1915, p. 136; 1934, p. 122.

*Type Locality.* Off Martha's Vineyard.

*Range.* East of Georges Bank and south of Martha's Vineyard, 156 to 524 fms.

**Buccinum sericatum** Hancock 1846, Ann. Mag. Nat. Hist., vol. 18, p. 328.

*References.* Oldroyd, 1927a, p. 254; Johnson, 1934, p. 123.

*Type Locality.* West coast of Davis Strait.

*Range.* Arctic Ocean; circumboreal.

**Buccinum sigmatopleura** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 144.

*Reference.* Oldroyd, 1927a, p. 252.

*Type Locality.* Station 4792, off Bering Island.

*Range.* Commander and Attu Islands, Bering Sea.

**Buccinum simulatum** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 150.

*Reference.* Oldroyd, 1927a, p. 251.

*Type Locality.* Station 4779, Petrel Bank, Bering Sea.

*Range.* Petrel Bank, Bering Sea, 43 to 54 fms.

**Buccinum solenum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 325.

*Reference.* Oldroyd, 1927a, p. 241.

*Type Locality.* U. S. Fish Comm. Station 3518, off Nunivak Island, Bering Sea.

*Range.* Bering Sea, Nunivak Island, to north of Unimak Island 36 fms.

**Buccinum strigillatum strigillatum** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 186.

*References.* Oldroyd, 1927a, p. 253; Grant and Gale, 1931, p. 669.

*Type Locality.* Albatross Station 3190, off Guadalupe Island, Lower California, 167 fms.

*Range.* Straits of Juan de Fuca, 178 fms., to San Diego, California, 822 fms., and Guadalupe Island, Lower California. Upper Pliocene of California.



**Buccinum strigillatum fucanum** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 152.

*Reference.* Oldroyd, 1927a, p. 253.

*Type Locality.* Station 3452, Straits of Juan de Fuca, 125 fms.

*Range.* Straits of Juan de Fuca and Oregon Coast.

**Buccinum tanquaryi** Baker 1919, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 511.

*Reference.* Johnson, 1934, p. 122.

*Type Locality.* Etah and Peeawahto Point, Greenland.

*Range.* Known only from the type locality.

**Buccinum taphrium** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 186.

*Reference.* Oldroyd, 1927a, p. 261.

*Type Locality.* Station 3330, in Bering Sea north of Unalaska, 351 fms.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Buccinum tenebrosum** Hancock 1846, Ann. Mag. Nat. Hist., vol. 18, p. 327.

*References.* Oldroyd, 1927a, p. 259; Grant and Gale, 1931, p. 669; Johnson, 1934, p. 123.

*Type Locality.* West coast of Davis Strait.

*Range.* Circumboreal; south to Bering Strait and Davis Strait. Pliocene of Washington.

**Buccinum tenellum** Dall 1883, Proc. U. S. Nat. Mus., vol. 24, p. 519.

*Reference.* Oldroyd, 1927a, p. 257.

*Type Locality.* Cape Etolin, north end of Nunivak Island, Bering Sea.

*Range.* Sea Horse Islands, Arctic Ocean, to Aleutian Islands, Alaska.

**Buccinum tenue tenue** Gray 1839, Beechey's Voyage, Zoöl., p. 128.

*References.* Verrill, 1882b, p. 495; Whiteaves, 1901a, p. 184; Oldroyd, 1927a, p. 240; Grant and Gale, 1931, p. 668; Johnson, 1934, p. 122.

*Type Locality.* Icy Cape, Arctic Ocean.

*Range.* Arctic Ocean; Aleutian Islands and Straits of Juan de Fuca. Labrador to the Gulf of Maine, 42 to 92 fms. Pliocene of St. George Island, Pribilof Islands; Pleistocene of Herschel Island, Yukon Territory.

**Buccinum tenue lyperum** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 324.

*Reference.* Oldroyd, 1927a, p. 241.

*Type Locality.* Southwestern Bering Sea, 100 fms.

*Range.* Known only from the type locality. Possible for northern British Columbia.



**Buccinum tenue rhodium** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 324.

*Reference.* Oldroyd, 1927a, p. 241.

*Type Locality.* Plover Bay, near Bering Strait, 8 to 25 fms.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Buccinum tottenii** Stimpson 1865, Can. Nat., vol. 2, p. 385.

*References.* Verrill, 1882b, p. 496; 1884, p. 252; Whiteaves, 1901a, p. 182; Johnson, 1934, p. 122.

*Type Locality.* Newfoundland Banks.

*Range.* Labrador to the Gulf of St. Lawrence and Grand Banks, 8 to 50 fms.

**Buccinum tumidulum** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 263.

*References.* Verrill, 1882b, p. 496; Harmer, 1914-19, p. 103; Johnson, 1934, p. 122.

*Type Locality.* Vadsø, Norway.

*Range.* Etah, Foulke Fjord, Greenland, 2 to 10 fms. Northern Europe.

**Buccinum undatum undatum** Linné 1758, Syst. Nat., Ed. 10, vol. 1, p. 740.

*References.* Whiteaves, 1901a, p. 181; Johnson, 1915, p. 135; 1934, p. 122.

*Type Locality.* "O. Europaeo."

*Range.* Labrador to New Jersey; Europe.

**Buccinum undatum crassum** King 1847, Ann. Mag. Nat. Hist., vol. 19, p. 337.

*Reference.* Harmer, 1914-19, p. 94.

*Type Locality.* Great Britain.

*Range.* Maine; Europe; Iceland.

**Buccinum undatum littorale** King 1846, Ann. Mag. Nat. Hist., vol. 18, p. 250.

*Reference.* Harmer, 1914-19, p. 93.

*Type Locality.* Coast of Northumberland, England.

*Range.* Eastern Coasts of North America (Harmer).

*Remarks.* Omitted by Johnson (1934) possibly because he considered it synonymous with one of the many other species of the genus or insufficiently distinct for recognition as a variety of *B. undatum*.

**Buccinum undatum striatum** Pennant 1777, Brit. Zoöl., vol. 6, p. 121.

*Reference.* Johnson, 1934, p. 122.

*Type Locality.* Great Britain.

*Range.* Labrador, 60 to 80 fms. Europe.

**Buccinum undulatum undulatum** Möller 1842, Index Moll. Groenl., p. 11.

*References.* Stimpson, 1865, p. 379; Posselt, 1898, p. 194.

*Type Locality.* Greenland.

*Range.* West Greenland.

**Buccinum variable** Verkrüzen 1881, Jahrb. Deutsch. Malak. Gesells., vol. 8, p. 300.

*References.* Tryon, 1881, p. 145; Harmer, 1914-19, p. 109.

*Type Locality.* Banks of Newfoundland.

*Range.* Type locality and Pliocene of Great Britain.

#### Genus *Volutharpa* Fischer 1856

**Volutharpa ampullacea** Middendorff 1848, Sibirische Reise, p. 237.

*Reference.* Oldroyd, 1927a, p. 262.

*Type Locality.* Tugur-Busen and Great Schantar Island to the south-east of the Okhotsk Sea.

*Range.* Bering Strait to Straits of Juan de Fuca. Japan.

**Volutharpa perryi** Jay 1855, Rept. of the Japan Exped., p. 295.

*Reference.* Oldroyd, 1927a, p. 262.

*Type Locality.* Bay of Yedo, Japan.

*Range.* St. Paul Island, Bering Sea. Japan.

#### Family NEPTUNEIDAE

##### Genus *Neptunea* Bolten 1798

**Neptunea decemcostata** Say 1826, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 214.

*References.* Whiteaves, 1901a, p. 188; Johnson, 1915, p. 136; 1921, pp. 1-4; 1934, p. 124.

*Type Locality.* Near Boston, Massachusetts.

*Range.* Circumboreal. Nova Scotia to Massachusetts Bay and Georges Bank, 10 to 50 fms.

**Neptunea despecta tornata** Gould 1839, Amer. Jour. Sci., vol. 38, p. 197.

*References.* Tryon, 1881, pp. 116, 230; Whiteaves, 1901a, p. 187; Johnson, 1915, p. 136; 1934, p. 124.

*Type Locality.* "Bank fisheries."

*Range.* Gulf of St. Lawrence to off south of Martha's Vineyard, 10 to 471 fms.

##### Genus *Volutopsius* Mörch 1857

**Volutopsius attenuatus** Dall 1874, Proc. Calif. Acad. Sci., vol. 5, p. 253.

*Reference.* Oldroyd, 1927a, p. 189.

*Type Locality.* Cook's Inlet, Alaska.

*Range.* Arctic Ocean to Pribilof Islands and Bristol Bay.

**Volutopsius beringi beringi** Middendorff 1846, Beitr. Malac. Ross., vol. 2, p. 147.

*Reference.* Oldroyd, 1927a, p. 186.

*Type Locality.* Bering Sea.

*Range.* Arctic Ocean to Pribilof Islands.

**Volutopsius beringi kobelti** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 528.

*Reference.* Oldroyd, 1927a, p. 187.

*Type Locality.* Pribilof Islands, Bering Sea.

*Range.* North end of Nunivak Island, Bering Sea, to Pribilof Islands.

**Volutopsius callorhinus callorhinus** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 7.

*Reference.* Oldroyd, 1927a, p. 190.

*Type Locality.* St. Paul Island, Bering Sea.

*Range.* Pribilof Islands, Bering Sea.

**Volutopsius callorhinus stejneri** Dall 1884, Proc. U. S. Nat. Mus., vol. 7, p. 346.

*Reference.* Oldroyd, 1927a, p. 191.

*Type Locality.* St. Paul Island, Pribilof Islands.

*Range.* Known only from the type locality.

**Volutopsius castaneus** Mörch 1858, Novitates Conchol. Moll. Mar., p. 7.

*Reference.* Oldroyd, 1927a, p. 191.

*Type Locality.* Sitka Island, Alaska.

*Range.* Pribilof, Aleutian, and Kodiak Islands, and Sitka, Alaska.

**Volutopsius filusus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 310.

*Reference.* Oldroyd, 1927a, p. 190.

*Type Locality.* U. S. Fish Comm. Station 3283, off Khudubine Islands, Bering Sea.

*Range.* Pribilof to Aleutian Islands, Bering Sea.

**Volutopsius fragilis** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 187.

*Reference.* Oldroyd, 1927a, p. 186.

*Type Locality.* Station 3252, off Unimak Island, Bering Sea, in 15 to 121 fms.

*Range.* Known only from the type locality.

**Volutopsius largillierti** Petit de la Saussaye 1851, Jour. de Conchyl., vol. 2, p. 254.

*References.* Verrill, 1882b, p. 511; 1884, p. 252; Whiteaves, 1901a, p. 188; Johnson, 1934, p. 124.

*Type Locality.* Newfoundland.

*Range.* Bradelle Bank and Bonaventure Island, Gulf of St. Lawrence. Off St. Lawrence Harbour, Newfoundland, 50 fms.

*Synonym.* *V. norvegica* auctt.

**Volutopsius melonis** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 187.

*Reference.* Oldroyd, 1927a, p. 186.

*Type Locality.* Station 3227, off the coast of Unalaska Island, Bering Sea.

*Range.* Known only from the type locality.

**Volutopsius middendorffii** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 186.

*Reference.* Oldroyd, 1927a, p. 188.

*Type Locality.* Stations 3216 and 3253, off Unimak Pass, Alaska, 36 to 61 fms.

*Range.* Known only from the type locality.

**Volutopsius regularis** Dall 1878, Proc. Calif. Acad. Sci., vol. 5, p. 60.

*Reference.* Oldroyd, 1927a, p. 191.

*Type Locality.* Unalaska, Alaska.

*Range.* Pribilof, Aleutian, and Sannak Islands, Alaska.

**Volutopsius rotundatus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 310.

*Reference.* Oldroyd, 1927a, p. 188.

*Type Locality.* Kodiak Island, Alaska.

*Range.* Kodiak Island to Cook's Inlet, Alaska.

**Volutopsius simplex** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 164.

*Reference.* Oldroyd, 1927a, p. 189.

*Type Locality.* Station 4792, off Bering Island.

*Range.* Off Bering Island, Bering Sea, 72 fms.

**Volutopsius stefanssoni** Dall 1919, Rept. Can. Arct. Exped., 1913-18, vol. 8, Part A., p. 22A.

*Reference.* Oldroyd, 1927a, p. 187.

*Type Locality.* Station 24, Point Barrow, Alaska.

*Range.* Arctic Ocean to Pribilof Islands, Bering Sea.

**Volutopsius trophonius** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 527.

*Reference.* Oldroyd, 1927a, p. 189.

*Type Locality.* Off Pribilof Islands, Alaska.

*Range.* Bering Sea to Pribilof Islands.

#### Subgenus *Pyrulofusus* "Beck" Mörch 1869

**Volutopsius deformis** Reeve 1847, Conchol. Iconica, *Fusus*, fig. 45.

*References.* Oldroyd, 1927a, p. 184; Johnson, 1934, p. 124.

*Type Locality.* Spitsbergen.

*Range.* Arctic Ocean and south to the Shumagin Islands, Alaska; circumboreal. West Greenland.

**Volutopsius harpa harpa** Mörch 1858, *Novitates Conchol. Moll. Mar.*, p. 5.

*References.* Oldroyd, 1927a, p. 184; Eyerdam, 1933, p. 126.

*Type Locality.* Sitka, Alaska.

*Range.* Pribilof Islands to Aleutians and eastward to Kodiak, Alaska.

**Volutopsius harpa dexius** Dall 1907, *Smiths. Misc. Coll.*, vol. 50, p. 164.

*Reference.* Oldroyd, 1927a, p. 185.

*Type Locality.* Station 4779, Petrel Bank, Bering Sea.

*Range.* Known only from the type locality.

#### Genus *Sulcosinus* Dall 1894

**Sulcosinus taphrius** Dall 1891, *Proc. U. S. Nat. Mus.*, vol. 14, p. 186.

*Reference.* Oldroyd, 1927a, p. 205.

*Type Locality.* Albatross Station 3330, off Akutan Island, Bering Sea.

*Range.* Bering Sea, off Unalaska, Alaska, 351 fms.

#### Genus *Searlesia* Harmer 1915

**Searlesia dira** Reeve 1846, *Conchol. Icon., Buccinum*, fig. 92.

*References.* Oldroyd, 1927a, p. 237; Grant and Gale, 1931, p. 645.

*Type Locality.* Not stated.

*Range.* Chirikoff Island, Alaska, to Monterey, California. Pliocene and Pleistocene of California.

*Remarks.* *Searlesia* is classified as a subgenus of *Kelletia* by Grant and Gale.

#### Genus *Plicifusus* Dall 1902

**Plicifusus arcticus** Philippi 1850, *Abbild. und Beschreib. neue . . . Conchylien*, vol. 3, p. 119.

*References.* Oldroyd, 1927a, p. 207; Grant and Gale, 1931, p. 664; Johnson, 1934, p. 126.

*Type Locality.* Arctic Ocean.

*Range.* Arctic Ocean, Bering Sea, Aleutian to Shumagin Islands, Alaska. Circumboreal. Greenland. Late Pliocene of St. George Island, Pribilof Islands.

**Plicifusus cretaceus** Reeve 1847, *Icon. Conch., Monogr. Buccinum*, pl. 14, fig. 112.

*References.* Verrill, 1884, p. 251; Johnson, 1934, p. 126.

*Type Locality.* Not specified.

*Range.* Labrador and the Gulf of St. Lawrence, 3 to 60 fms.

**Plicifusus johanseni** Dall 1919, *Rept. Can. Arct. Exped., 1913-18, Part A*, vol. 8, p. 21A.

*Reference.* Oldroyd, 1927a, p. 207.

*Type Locality.* Point Barrow, sandspit, Alaska.

*Range.* Point Barrow to Icy Cape, Arctic Ocean.

**Plicifusus kroyeri** Möller 1842, Index Moll. Grönl., p. 15.

*References.* Verrill, 1882b, p. 510; Posselt, 1898, p. 184; Whiteaves, 1901a, p. 190; Oldroyd, 1927a, p. 206; Johnson, 1934, p. 126.

*Type Locality.* Greenland.

*Range.* Point Barrow, Arctic Ocean. Circumboreal. Greenland to Gulf of St. Lawrence and Newfoundland.

*Remarks.* One specimen in the National Museum of Canada (No. 43) from Gaspé, Quebec, may be this species.

**Plicifusus? syrtensis** Packard 1867, Mem. Boston Soc. Nat. Hist., vol. 1, p. 288.

*References.* Verrill, 1882b, p. 511; Whiteaves, 1901a, p. 191; Johnson, 1934, p. 126.

*Type Locality.* Square Island Harbour, Labrador, 30 fms.

*Range.* Known only from the type locality.

**Plicifusus verkruzeni** Kobelt 1876, Jahrb. Malak. Gesells., 1876, p. 70.

*Reference.* Oldroyd, 1927a, p. 208.

*Type Locality.* Arctic.

*Range.* Arctic Ocean to Bering Strait. Circumboreal.

#### Section *Helicofusus* Dall 1916

**Plicifusus laticordatus** Dall 1907, Smiths. Inst. Misc. Coll., vol. 50, p. 161.

*Reference.* Oldroyd, 1927a, p. 211.

*Type Locality.* Station 3279, Bristol Bay, Alaska, 41 fms.

*Range.* Bering Sea to Straits of Juan de Fuca.

#### Section *Latifusus* Dall 1916

**Plicifusus griseus** Dall 1877, Proc. U. S. Nat. Mus., vol. 12, p. 322.

*References.* Oldroyd, 1927a, p. 210; Grant and Gale, 1931, p. 664.

*Type Locality.* U. S. Fish Comm. Station 2839, near the islands off Santa Barbara, California, 414 fms.

*Range.* Bering Sea, 27 fms., to San Diego, California, 636 fms. Lower Pleistocene? of California.

#### Section *Microfusus* Dall 1916

**Plicifusus brunneus** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 6.

*Reference.* Oldroyd, 1927a, p. 210.

*Type Locality.* Nunivak Island, Bering Sea, 10 fms.

*Range.* Port Clarence, Bering Straits, to Nunivak and the Pribilof Islands.

#### Subgenus *Retifusus* Dall 1916

**Plicifusus incisus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 314.

*Reference.* Oldroyd, 1927a, p. 208.

*Type Locality.* U. S. Fish Comm. Station 3643, western Bering Sea.

*Range.* Arctic Ocean to Bering Sea and Shumagin Islands.



**Plicifusus oceanodromae** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 314.

*Reference.* Oldroyd, 1927a, p. 209.

*Type Locality.* U. S. Fish Comm. Station 4777, on Petrel Bank, Bering Sea.

*Range.* Petrel Bank, Bering Sea, to Aleutian and Shumagin Islands.

**Plicifusus virens** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 6.

*Reference.* Oldroyd, 1927a, p. 209.

*Type Locality.* Kyska Harbour, 10 fms.

*Range.* Bering Sea to Middleton Island, Alaska.

#### Genus *Mohnia* Friele 1878

(Subgenus of *Colus* fide Johnson, 1934, p. 125)

**Mohnia corbis** Dall 1913, Proc. Acad. Nat. Sci. Phila., 1913, p. 501.

*Reference.* Oldroyd, 1927a, p. 200.

*Type Locality.* Bering Sea, off Pribilof Islands, 1,771 fms.

*Range.* Off the Pribilof Islands, 1,771 fms.

**Mohnia exquisita** Dall 1913, Proc. Acad. Nat. Sci. Phila., 1913, p. 502.

*Reference.* Oldroyd, 1927a, p. 202.

*Type Locality.* Bering Sea, off Koniugi Islands, Aleutians, 1,766 fms.

*Range.* Known only from the type locality.

**Mohnia frielei** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 186.

*Reference.* Oldroyd, 1927a, p. 200.

*Type Locality.* Albatross Station 2860, off British Columbia.

*Range.* Off Queen Charlotte Islands, British Columbia, 876 fms.

**Mohnia robusta** Dall 1913, Proc. Acad. Nat. Sci. Phila., 1913, p. 501.

*Reference.* Oldroyd, 1927a, p. 199.

*Type Locality.* Bering Sea, off Pribilof Islands, 987 fms.

*Range.* Off Pribilof Islands, 987 to 1,401 fms.

**Mohnia siphonoidea** Dall 1913, Proc. Acad. Nat. Sci. Phila., 1913, p. 502.

*Reference.* Oldroyd, 1927a, p. 201.

*Type Locality.* Bering Sea, off Pribilof Islands, 987 fms.

*Range.* Known only from the type locality.

#### Genus *Liomesus* Stimpson 1865

**Liomesus nassula** Dall 1901, Nautilus, vol. 15, p. 89.

*Reference.* Oldroyd, 1927a, p. 197.

*Type Locality.* Near the Pribilof Islands, Bering Sea, 121 fms.

*Range.* Bering Sea, Pribilof Islands to Alaska, 14 to 121 fms.



**Liomesus nux** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 7.

*Reference.* Oldroyd, 1927a, p. 199.

*Type Locality.* Aleutian Islands, 10 fms.

*Range.* Aleutian Islands to Shumagin Islands, Alaska. Japan.

**Liomesus ooides ooides** Middendorff 1848, Bull. Acad. St. Petersb., vol. 6, p. 175.

*Reference.* Oldroyd, 1927a, p. 198.

*Type Locality.* Okhotsk Sea?

*Range.* Okhotsk Sea; Pleistocene of Japan.

**Liomesus ooides canaliculatus** Dall 1874, Proc. Calif. Acad. Sci., vol. 5, p. 252.

*References.* Oldroyd, 1927a, p. 198; Grant and Gale, 1931, p. 666.

*Type Locality.* Cape Espenberg.

*Range.* Icy Cape, Arctic Ocean, to Shumagin Islands. Pliocene of England and Iceland.

#### Genus *Exilioidea* Grant and Gale 1931

**Exilioidea rectirostris** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 64.

*References.* Oldroyd, 1927a, p. 206; Grant and Gale, 1931, p. 665.

*Type Locality.* Puget Sound.

*Range.* Behm Canal, Alaska, to Cape San Quentin, Lower California. Pleistocene of California.

#### Genus *Colus* Bolten 1798

**Colus islandicus** Gmelin 1790, Syst. Nat. Ed. 13, p. 3555.

*References.* Tryon, 1881, p. 123; Verrill, 1882b, p. 508; Harmer, 1914-19, pp. 187, 373; Grant and Gale, 1931, p. 661; Johnson, 1934, p. 124.

*Type Locality.* Iceland?

*Range.* Newfoundland to Labrador and Norway.

**Colus latericeus** Möller 1842, Krøyer's Tidskr., vol. 4, p. 88.

*References.* Verrill, 1882b, p. 509; Whiteaves, 1901a, p. 191; Harmer, 1914-19, pp. 189, 374; Johnson, 1934, p. 124.

*Type Locality.* Greenland.

*Range.* Greenland to off Newport, Rhode Island, 238 to 365 fms.

**Colus sarsii** Jeffreys 1869, Nature, vol. 1, p. 168.

*Reference.* Harmer, 1914-19, p. 198.

*Type Locality.* Great Britain, Red Crag.

*Range.* Greenland and New England Coast.

*Remarks.* The range is given according to Harmer (1914-19). The species is not mentioned by Johnson (1934).

**Colus stimpsoni stimpsoni** Mörch 1867, Vid. Medd. Naturh. Foren. Kjöbenhavn, p. 83.

*References.* Whiteaves, 1901a, p. 188; Johnson, 1934, p. 124.

*Type Locality.* "Faerö"

*Range.* Labrador and in deep water to North Carolina, 1 to 471 fms.

**Colus stimpsoni brevis** Verrill 1882, Catalogue Marine Moll. N. Engl., p. 500.

*References.* Johnson, 1915, p. 137; 1934, p. 124.

*Type Locality.* Off Chatham, Massachusetts.

*Range.* Maine to Massachusetts, 10 to 17 fms.

**Colus stimpsoni liratus** Verrill 1882, Catalogue Marine Moll. N. Engl., p. 500.

*References.* Johnson, 1915, p. 137; 1934, p. 124.

*Type Locality.* Bay of Fundy.

*Range.* Maine to Vineyard Sound, Massachusetts, 18 to 319 fms.

**Colus tortuosus** Reeve 1855, Belcher's Last Arctic Voyage, vol. 2, p. 394.

*Reference.* Harmer, 1914-19, p. 190.

*Type Locality.* Arctic.

*Range.* Siberia, Greenland, Alaska.

#### Subgenus *Anomalosipho* Dautzenberg and Fischer 1912

**Colus adonis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 316.

*Reference.* Oldroyd, 1927a, p. 222.

*Type Locality.* U. S. Bur. Fisheries Station 5053, Suruga Gulf, Japan.

*Range.* Straits of Juan de Fuca to San Diego, California. Japan.

**Colus conulus** Aurivillius 1885, Vega Exped. Vetensk. Iakttagelser, vol. 4, p. 354.

*Reference.* Oldroyd, 1927a, p. 223.

*Type Locality.* ?

*Range.* Arctic Ocean north of Bering Strait. Circumboreal.

**Colus dautzenbergi** Dall 1921, *fide* Johnson, apparently not published by Dall.

*Reference.* Johnson, 1934, p. 125.

*Type Locality.* ?

*Range.* Greenland. Circumboreal.

*Synonym.* *Colus verkruzeni* Dautzenberg and Fischer 1912, not Kobelt 1876.

**Colus lividus** Mörch 1862, Jour. de Conchyl., vol. 10, p. 36.

*References.* Verrill, 1882b, p. 507; 1884, p. 251; Johnson, 1934, p. 125.

*Type Locality.* Newfoundland.

*Range.* Labrador to the Gulf of St. Lawrence.

**Colus martensi** Krause 1885, Archiv für Naturgeschichte, vol. 51, p. 287.

*Reference.* Oldroyd, 1927a, p. 222.

*Type Locality.* Metschigme Bay, Bering Strait.

*Range.* Plover Bay, Bering Strait, 20 fms.

**Colus ossiana** Friele 1879, Catal. Norw. Nordm. Exp. Spitz., Moll., p. 279.

*References.* Verrill, 1882b, p. 509; Whiteaves, 1901a, p. 189; Johnson, 1934, p. 125.

*Type Locality.* Spitsbergen.

*Range.* Murray Bay (Dawson). Grand Banks, 180 fms. (Verrill). Northern Europe.

**Colus pubescens** Verrill 1882, Catalogue Marine Moll. N. Engl., p. 501.

*References.* Whiteaves, 1901a, p. 189; Johnson, 1915, p. 137; 1934, p. 125.

*Type Locality.* "Off Cape Sable, N.S. . . . off Martha's Vineyard."

*Range.* Gulf of St. Lawrence to North Carolina, 18 to 640 fms.

**Colus sabinii** Gray 1824, Suppl. to App. Parry's First Voy., p. cexl.

*References.* Hancock, 1846, p. 330; Verrill, 1882b, p. 503; Harmer, 1914-19, p. 183; Johnson, 1915, p. 138; 1934, p. 125.

*Type Locality.* Northwest Passage.

*Range.* Davis Strait, Baffin's Bay (Harmer) to Cashes Ledge, Gulf of Maine (Johnson, 1934).

**Colus ventricosus** Gray 1839, Zoöl. Beechey's Voy., p. 117.

*References.* Whiteaves, 1901a, p. 190; Johnson, 1915, p. 138; 1934, p. 125.

*Type Locality.* Not specified.

*Range.* Nova Scotia to Georges Bank. Probably also Arctic Canada.

#### Subgenus *Aulacofusus* Dall 1918

**Colus acosmius** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 188.

*Reference.* Oldroyd, 1927a, p. 217.

*Type Locality.* Albatross Station 3329, off Unalaska Islands, Bering Sea.

*Range.* Off Pribilof Islands, Bering Sea, to Unalaska, Alaska. Possible for northern British Columbia.

**Colus barbarinus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 316.

*Reference.* Oldroyd, 1927a, p. 215.

*Type Locality.* U. S. Fish Comm. Station 3282, off Khudubine Island, Bering Sea.

*Range.* Southern Bering Sea to off Khudubine Island, 53 fms. Possible for Arctic Canada.

**Colus bristolensis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 316.

*Reference.* Oldroyd, 1927a, p. 214.

*Type Locality.* U. S. Fish Comm. Station 3252, Bering Sea.

*Range.* Pribilof Islands to Unimak Island, Alaska, 27 to 62 fms. Possible for northern British Columbia and Arctic Canada.

**Colus calameus** Dall 1907, Smiths. Inst. Misc. Coll., vol. 50, p. 158.

*Reference.* Oldroyd, 1927a, p. 213.

*Type Locality.* Station 4797, Okhotsk Sea, 682 fms.

*Range.* Western Bering Sea, off Starichkoff Islands. Possible for Arctic Canada.

**Colus calathus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 317.

*Reference.* Oldroyd, 1927a, p. 216.

*Type Locality.* U. S. Fish Comm. Station 2853, near Shumagin Islands, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Colus capponius** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 317.

*Reference.* Oldroyd, 1927a, p. 217.

*Type Locality.* Bering Strait, near Port Clarence, Alaska.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Colus esychus** Dall 1907, Smiths. Inst. Misc. Coll., vol. 50, p. 159.

*Reference.* Oldroyd, 1927a, p. 215.

*Type Locality.* Stations 4791 and 4792, off Bering Island, Alaska.

*Range.* Point Barrow, Arctic Ocean, to Bering Island, Alaska. Possible for Arctic Canada.

**Colus halidonus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 318.

*Reference.* Oldroyd, 1927a, p. 218.

*Type Locality.* Off Destruction Island, Washington, 516 fms.

*Range.* Pribilof Islands, 81 fms., to Monterey Bay, California, 633 fms.

**Colus herendeeni** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 527.

*Reference.* Oldroyd, 1927a, p. 212.

*Type Locality.* Bering Sea and Aleutian Islands.

*Range.* Southern Bering Sea, Nunivak Islands, to Aleutian Islands, Alaska. Possible for northern British Columbia and Arctic Canada.

**Colus nobilis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 315.

*Reference.* Oldroyd, 1927a, p. 213.

*Type Locality.* U. S. Fish Comm. Station 3484, in Bering Sea.

*Range.* Near Pribilof Islands, Alaska, in 60 fms. Possible for Arctic Canada.

**Colus ombronius** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 315.

*Reference.* Oldroyd, 1927a, p. 214.

*Type Locality.* U. S. Fish Comm. Station 3252, Bering Sea.

*Range.* Eastern Bering Sea, from Nunivak Island to Bristol Bay and Pribilof Islands.

**Colus periscelidus** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 187.

*Reference.* Oldroyd, 1927a, p. 212.

*Type Locality.* Albatross Station 2842, off Akutan Islands, Alaska.

*Range.* Commander and Aleutian Islands eastward to Sannak, Alaska. Possible for northern British Columbia.

**Colus roseus** Dall 1877, Proc. Calif. Acad. Sci., vol. 7, p. 7.

*Reference.* Oldroyd, 1927a, p. 215.

*Type Locality.* Arctic Ocean.

*Range.* Off Cape Lisburne, Arctic Ocean, 10 to 15 fms.

**Colus sapius** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 317.

*Reference.* Oldroyd, 1927a, p. 216.

*Type Locality.* U. S. Fish Comm. Station 2859, southwest of Sitka, Alaska.

*Range.* Off Sitka, Alaska, 1,569 fms. Possible for northern British Columbia.

**Colus spitzbergensis** Reeve 1855, Last of the Arctic Voyages, p. 395.

*References.* Whiteaves, 1901a, p. 189; Oldroyd, 1927a, p. 212; Johnson, 1934, p. 125.

*Type Locality.* Spitsbergen.

*Range.* Labrador to the Gulf of St. Lawrence, 1 to 142 fms. Circumboreal. Arctic Ocean to Straits of Juan de Fuca.

#### Subgenus *Latisipho* Dall 1916

**Colus aphelus** Dall 1889, Proc. U. S. Nat. Mus., vol. 12, p. 325.

*References.* Oldroyd, 1927a, p. 225; Grant and Gale, 1931, p. 663.

*Type Locality.* Station 2839, off Santa Barbara County, California, 414 fms.

*Range.* Chirikoff Island, Alaska, to San Diego, California, 290 to 626 fms. Lower Pleistocene of California?.

**Colus dalmasius** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 322.

*Reference.* Oldroyd, 1927a, p. 227.

*Type Locality.* U. S. Fish Comm. Station 2862, off coast of British Columbia.

*Range.* Off British Columbia, 238 fms.

**Colus erroneus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 321.

*Reference.* Oldroyd, 1927a, p. 224.

*Type Locality.* Bering Sea.

*Range.* Pribilof Islands, Bering Sea, to Straits of Juan de Fuca, 308 fms.

**Colus halibrectus** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 188.

*References.* Oldroyd, 1927a, p. 226; Grant and Gale, 1931, p. 662.

*Type Locality.* Albatross Station 3330, off coast of Akutan Island, Bering Sea, 351 fms.

*Range.* Southern Bering Sea, near Unalaska Island, 351 to 399 fms. Pliocene of California.

**Colus halli** Dall 1873, Proc. Calif. Acad. Sci., vol. 5, p. 59.

*Reference.* Oldroyd, 1927a, p. 224.

*Type Locality.* Sanborn Harbor, Nagai.

*Range.* Nunivak Island, Bering Sea, to San Diego, California, 65 to 293 fms.

**Colus hypolispus** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 188.

*Reference.* Oldroyd, 1927a, p. 224.

*Type Locality.* Albatross Station 3254, in Bering Sea.

*Range.* Arctic Ocean to Aleutian and Shelikoff Strait, Alaska.

**Colus jordani** Dall 1913, Proc. U. S. Nat. Mus., vol. 45, p. 588.

*References.* Oldroyd, 1927a, p. 225; Grant and Gale, 1931, p. 663.

*Type Locality.* Sucia Island, Gulf of Georgia, 67 fms.

*Range.* Bering Sea, 70 to 100 fms.; British Columbia, 67 to 142 fms.; Monterey Bay, California, 633 fms. Pleistocene of Oregon.

#### Section *Limatofusus* Dall 1918

**Colus halimeris** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 320.

*Reference.* Oldroyd, 1927a, p. 221.

*Type Locality.* U. S. Fish Comm. Station 4248, in Eastern Passage, near Stikine River, southeastern Alaska.

*Range.* British Columbia to San Diego, California, 60 to 822 fms.

**Colus morditus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 319.

*Reference.* Oldroyd, 1927a, p. 219.

*Type Locality.* U. S. Fish Comm. Station 4198, Gulf of Georgia.

*Range.* Known only from the type locality.

**Colus pulcius** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 318.

*Reference.* Oldroyd, 1927a, p. 221.

*Type Locality.* Arctic Ocean, north of Bering Strait.

*Range.* Known only from the type locality.



**Colus tahwitanus** Dall 1918, Proc. U. S. Nat. Mus., vol. 54, p. 228.

*Reference.* Oldroyd, 1927a, p. 219.

*Type Locality.* Off Tahwit Head, Washington, 178 fms.

*Range.* Known only from the type locality.

**Colus timetus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 318.

*Reference.* Oldroyd, 1927a, p. 219.

*Type Locality.* U. S. Fish Comm. Station 3333, off Iliuliuk Harbour, Unalaska.

*Range.* Known only from the type locality.

**Colus trombinus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 321.

*Reference.* Oldroyd, 1927a, p. 221.

*Type Locality.* U. S. Fish Comm. Station 3253, Bering Sea, off Pribilof Islands.

*Range.* Pribilof Islands, Bering Sea, 36 fms.

**Colus trophius** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 319.

*Reference.* Oldroyd, 1927a, p. 218.

*Type Locality.* U. S. Fish Comm. Station 3071, off Sea Lion Rock, Washington, 685 fms.

*Range.* Eastern Bering Sea to Pribilof Islands to San Nicolas Island, 1,100 fms.

#### Subgenus *Siphonorbis* Mörch 1869

**Colus pygmaeus** Gould 1841, Rept. Inv. Mass., p. 284.

*References.* Whiteaves, 1901a, p. 189; Johnson, 1915, p. 138; 1934, p. 125.

*Type Locality.* New England.

*Range.* Gulf of St. Lawrence and in deep water to North Carolina, 1 to 640 fms.

#### Genus *Beringius* Dall 1879 and 1886

**Beringius aleuticus** Dall 1894, Proc. U. S. Nat. Mus., vol. 17, p. 711.

*Reference.* Oldroyd, 1927a, p. 196.

*Type Locality.* Station 3481, near Amukhta Pass, Aleutian Islands, 248 fms.

*Range.* Known only from the type locality. Possible for northern British Columbia.

**Beringius crebricostatus crebricostatus** Dall 1887, Proc. Calif. Acad. Sci., vol. 7, p. 6.

*Reference.* Oldroyd, 1927a, p. 193.

*Type Locality.* Unalaska, Alaska, 100 fms.

*Range.* Plover Bay, Aleutian Islands, and eastward to Shumagin Islands, Alaska. Possible for northern British Columbia.



**Beringius crebricostatus undatus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 311.

*References.* Oldroyd, 1927a, p. 193; Eyerdam, 1933, p. 126.

*Type Locality.* U. S. Bur. Fisheries Station 4224, Cygnet Inlet, Boca de Quadra, Alaska, 160 fms.

*Range.* Unalaska, Alaska, south and east to British Columbia, 238 fms.

**Beringius frielei** Dall 1894, Proc. U. S. Nat. Mus., vol. 17, p. 711.

*Reference.* Oldroyd, 1927a, p. 195.

*Type Locality.* Station 3497, in Bering Sea, near the Pribilof Islands.

*Range.* Pribilof Islands, Bering Sea.

**Beringius indentatus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 312.

*Reference.* Oldroyd, 1927a, p. 197.

*Type Locality.* U. S. Fish Comm. Station 3282, off Khudubine Islands, Bering Sea.

*Range.* Kotzebue Sound to Aleutian Islands. Also Japan.

**Beringius kennicottii kennicottii** Dall 1907, Amer. Jour. Conch., vol. 7, p. 108.

*Reference.* Oldroyd, 1927a, p. 194.

*Type Locality.* Captain's Harbor, Unalaska.

*Range.* Aleutian Islands to Cook's Inlet, Alaska.

**Beringius kennicottii incisus** Dall 1907, Smiths. Misc. Coll., vol. 50, p. 163.

*References.* Oldroyd, 1927a, p. 194; Grant and Gale, 1931, p. 651.

*Type Locality.* Station 4779, Bering Sea.

*Range.* Petrel Bank, Bering Sea, 45 fms.

**Beringius malleatus** Dall 1884, Proc. U. S. Nat. Mus., vol. 7, p. 525.

*Reference.* Oldroyd, 1927a, p. 195.

*Type Locality.* Point Barrow, Alaska.

*Range.* Point Barrow to Pribilof Islands, Alaska.

**Beringius marshalli** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 311.

*Reference.* Oldroyd, 1927a, p. 196.

*Type Locality.* U. S. Bur. Fisheries Station 3549, Bering Sea.

*Range.* Pribilof Islands to Unalaska, Alaska.

**Beringius ossiani** Friele 1879, Catal. Norw. Nordmark Exp. Spitz., Moll., p. 7.

*Reference.* Johnson, 1934, p. 126.

*Type Locality.* Spitsbergen.

*Range.* Grand Banks, 180 fms. (Verrill). Murray Bay (Dawson) (probably Pleistocene). Northern Europe.

**Beringius stimpsoni** Gould 1860, Proc. Boston Soc. Nat. Hist., vol. 7, p. 325.

*Reference.* Oldroyd, 1927a, p. 195.

*Type Locality.* Arikamcheche Island, Bering Straits.

*Range.* Point Barrow to Pribilof Islands, Alaska.

*Remarks.* Possible for northern British Columbia and the Arctic coast of Canada.

Genus *Chrysodomus* Swainson 1840

**Chrysodomus amiantus** Dall 1889, Proc. U. S. Nat. Mus., vol. 12, p. 321.

*Reference.* Oldroyd, 1927a, p. 228.

*Type Locality.* Station 2839, near Santa Barbara Islands, California, 414 fms.

*Range.* Pribilof Islands, Bering Sea, to Monterey Bay, California.

**Chrysodomus borealis** Philippi 1850, Abbild. u. Beschreib. neue Conchyl., vol. 3, p. 118.

*References.* Oldroyd, 1927a, p. 231; Grant and Gale, 1931, p. 657.

*Type Locality.* Arctic.

*Range.* Arctic Ocean, Aleutian Islands, and Shumagin Islands, Alaska. Late Pliocene of St. George and St. Paul Islands, Pribilof Islands.

**Chrysodomus insularis** Dall 1894, Proc. U. S. Nat. Mus., vol. 17, p. 707.

*Reference.* Oldroyd, 1927a, p. 231.

*Type Locality.* Station 3489, in Bering Sea, near Pribilof Islands.

*Range.* Pribilof Islands, Bering Sea. Possible for Arctic Canada.

**Chrysodomus liratus** Martyn 1784, Figures of Nondescrib. Shells, table 2, pl. 43.

*References.* Oldroyd, 1927a, p. 237; Grant and Gale, 1931, p. 654.

*Type Locality.* King George Sound, Hudson Strait, Labrador.

*Range.* Icy Cape, Arctic Ocean, to Puget Sound, and off Point Pinos, California, in 958 fms. Japan. Miocene of Oregon and Washington; Pliocene of Oregon; Pleistocene of Alaska.

**Chrysodomus nuceus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 322.

*Reference.* Oldroyd, 1927a, p. 230.

*Type Locality.* Cook's Inlet, Alaska.

*Range.* Arctic Ocean to Cook's Inlet, Alaska.

**Chrysodomus oncodes** Dall 1907, Smiths. Inst. Misc. Coll., vol. 50, p. 155.

*Reference.* Oldroyd, 1927a, p. 229.

*Type Locality.* Station 4804, Okhotsk Sea, 229 fms.

*Range.* Petrel Bank, Bering Sea; Kuril Islands. Possible for Arctic Canada.

**Chrysodomus phoeniceus** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 187.

*Reference.* Oldroyd, 1927a, p. 231.

*Type Locality.* Albatross Station 2862, off the coast of British Columbia.

*Range.* Behm Canal, Alaska, to Cascade Head, Oregon.

**Chrysodomus pribiloffensis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 323.

*References.* Oldroyd, 1927a, p. 231; Grant and Gale, 1931, p. 657.

*Type Locality.* Off Pribilof Islands, Bering Sea, 50 to 100 fms.

*Range.* Pribilof Islands to Kodiak Island, Alaska, and the Queen Charlotte Islands, British Columbia. Japan. Late Pliocene of St. Paul Island, Pribilof Islands.

**Chrysodomus saturus saturus** Martyn 1784, Figs. of Nondescrib. Shells, table 2, fig. 47.

*References.* Oldroyd, 1927a, p. 232; Grant and Gale, 1931, p. 654.

*Type Locality.* King George Sound, Hudson Strait, Labrador.

*Range.* Arctic Ocean from Point Barrow to Bering Strait; Plover Bay, south and east to Cape Douglas, Alaska. Pleistocene, south side Herschel Island, Yukon Territory (doubtful).

**Chrysodomus saturus beringianus** Middendorff 1847, Bull. Acad. Sci. St. Petersburg, vol. 6, p. 147.

*Reference.* Oldroyd, 1927a, p. 233.

*Type Locality.* Bering Sea.

*Range.* Plover Bay, near Bering Strait. Possible for Arctic Canada.

**Chrysodomus saturus communis** Middendorff 1848, Beitr. Malac. Ross., vol. 2, p. 131.

*Reference.* Oldroyd, 1927a, p. 235.

*Type Locality.* Arctic.

*Range.* Point Barrow, Arctic Ocean, to Bering Sea. Possible for Arctic Canada.

**Chrysodomus saturus elatior** Middendorff 1848, Sibirische Reise, p. 225.

*References.* Oldroyd, 1927a, p. 233; Grant and Gale, 1931, p. 654.

*Type Locality.* Bering Sea.

*Range.* Norton Sound, south to Unalaska, Alaska. Late Pliocene of St. George and St. Paul islands, Pribilof group.

**Chrysodomus saturus tabularis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 323.

*References.* Oldroyd, 1927a, p. 236; Grant and Gale, 1931, p. 654.

*Type Locality.* Bering Sea, near Nunivak Island.

*Range.* Pribilof and Nunivak islands, Bering Sea. Possible for Arctic Canada. Late Pliocene of St. Paul Island, Pribilof group.

**Chrysodomus smirnius** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 322.

*Reference.* Oldroyd, 1927a, p. 230.

*Type Locality.* U. S. Fish Comm. Station 3461, Straits of Juan de Fuca.

*Range.* Nunivak Island to Straits of Juan de Fuca.

**Chrysodomus solutus** Hermann 1781, Der Naturforscher, vol. 16, p. 53.

*References.* Oldroyd, 1927a, p. 236; Grant and Gale, 1931, p. 657.

*Type Locality.* Arctic.

*Range.* Mackenzie River delta west to Point Barrow and south to Bristol Bay, Bering Sea. Upper Pliocene of St. George and St. Paul islands, Pribilof Islands.

**Chrysodomus vinosus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 323.

*Reference.* Oldroyd, 1927a, p. 232.

*Type Locality.* "Western Bering Sea and Avacha Bay, Kamchatka, in 16 fathoms."

*Range.* Western Bering Sea and Avacha Bay, Kamchatka. Possible for northern British Columbia.

#### Subgenus *Sulcosipho* Dall 1916

**Chrysodomus tabulatus** Baird 1863, Proc. Zoöl. Soc. London, 1863, p. 6.

*References.* Oldroyd, 1927a, p. 227; Grant and Gale, 1931, p. 658.

*Type Locality.* Puget Sound.

*Range.* British Columbia to San Diego, California, 46 to 218 fms. Miocene of Washington, Oregon, and California; Pliocene of Oregon and California; Pleistocene of California.

#### Genus *Ancistrolepis* Dall 1894

**Ancistrolepis beringianus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 313.

*Reference.* Oldroyd, 1927a, p. 204.

*Type Locality.* U. S. Fish Comm. Station 4794, west Bering Sea.

*Range.* Bering Sea, off Starichkoff Island.

**Ancistrolepis californicus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 313.

*Reference.* Oldroyd, 1927a, p. 203.

*Type Locality.* U. S. Fish Comm. Station 2919, near Cortez Bank, 984 fms.

*Range.* Straits of Juan de Fuca to San Diego, California, 152 to 984 fms.

**Ancistrolepis eucosmius eucosmius** Dall 1891, Proc. U. S. Nat. Mus., vol. 14, p. 187.

*Reference.* Oldroyd, 1927a, p. 202.

*Type Locality.* Albatross Stations 3227 and 2919, off Unalaska Island, Alaska.

*Range.* Pribilof Islands, Alaska, to Tillamook Bay, Oregon.

**Ancistrolepis eucosmius bicinctus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 312.

*Reference.* Oldroyd, 1927a, p. 203.

*Type Locality.* U. S. Fish Comm. Station 3337, southeast of Unalaska.

*Range.* Pribilof Islands to Shumagin Islands, Alaska, 34 to 280 fms.

**Ancistrolepis magnus** Dall 1895, Proc. U. S. Nat. Mus., vol. 17, p. 709.

*References.* Oldroyd, 1927a, p. 203; Grant and Gale, 1931, p. 660.

*Type Locality.* Station 3254, Bering Sea.

*Range.* Okhotsk and Bering Seas, 25 to 70 fms. Japan.

*Remarks.* Grant and Gale classify this species under genus *Neptunea*, subgenus *Sulcosipho*, section *Clinopegma*.

#### Family FASCIOLARIIDAE

##### Genus *Fusinus* Rafinesque 1815

##### Section *Gracilipurpura* Jousseaume 1880

***Fusinus kobelti monksae*** Dall 1915, Nautilus, vol. 29, p. 55.

*References.* Oldroyd, 1927a, p. 177; Grant and Gale, 1931, p. 640.

*Type Locality.* San Pedro, California.

*Range.* Banks Island, British Columbia, to Pequeña Bay, Lower California. Pliocene and Pleistocene of California.

##### Genus *Ptychatractus* Stimpson 1865

***Ptychatractus ligatus*** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 51.

*References.* Verrill, 1873, p. 642; Tryon, 1881, p. 72; Whiteaves, 1901a, p. 191; Johnson, 1915, p. 139; 1934, p. 127.

*Type Locality.* Mingan Islands, Gulf of St. Lawrence.

*Range.* Gulf of St. Lawrence to Connecticut, 15 to 60 fms.

***Ptychatractus occidentalis*** Stearns 1871, Conchol. Mem., vol. 7, p. 1.

*Reference.* Oldroyd, 1927a, p. 175.

*Type Locality.* Near Attu Island, Aleutian group, Bering Sea.

*Range.* Bering Island to Shumagin Islands, Alaska.

## Family VOLUTIDAE

Genus *Fulgoraria* Schumacher 1817Subgenus *Boreomelon* Dall 1919**Fulgoraria stearnsii** Dall 1872, Proc. Calif. Acad. Sci., vol. 4, p. 270.*Reference.* Oldroyd, 1927a, p. 167.*Type Locality.* Pribilof Islands, Alaska.*Range.* Pribilof, Aleutian and Shumagin Islands, Alaska.

## Family MITRIDAE

Genus *Mitromorpha* A. Adams 1865NOTE. A subgenus of *Mangelia*, according to Grant and Gale, 1931, p. 596.**Mitromorpha gracilior** Hemphill 1884, in Tryon, Man. Conch., vol. 6, p. 317.*References.* Oldroyd, 1927a, p. 174; Grant and Gale, 1931, p. 597.*Type Locality.* Monterey, California.*Range.* Forrester Island, Alaska, to San Diego, California. Upper Pliocene and Pleistocene of California.Genus *Volutomitra* Gray 1857**Volutomitra alaskana** Dall 1902, Nautilus, vol. 15, p. 103.*Reference.* Oldroyd, 1927a, p. 173.*Type Locality.* Pribilof Islands, Alaska.*Range.* Pribilof Islands, Alaska, to San Diego, California.

## Family MARGINELLIDAE

Genus *Hyalina* Schumacher 1817Subgenus *Cypraeolina* Cerulli-Irelli 1911**Hyalina pyriformis** Carpenter 1865, Jour. de Conchyl., ser. 3, vol. 5, p. 148.*References.* Oldroyd, 1927a, p. 166; Grant and Gale, 1931, p. 632.*Type Locality.* San Diego, California.*Range.* Peril Strait, Alaska, to Mazatlan, Mexico.

## Family OLIVIDAE

Genus *Olivella* Swainson 1840**Olivella biplicata fucana** T. S. Oldroyd 1921, Nautilus, vol. 34, p. 118.*References.* Oldroyd, 1927a, p. 161; Grant and Gale, 1931, p. 625; Gifford and Gifford, 1941, pp. 10-12.*Type Locality.* Straits of Juan de Fuca.*Range.* Vancouver Island, British Columbia, to Straits of Juan de Fuca. Pliocene of California.



**Olivella bætica** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 661.

*References.* Oldroyd, 1927a, p. 163; Grant and Gale, 1931, p. 627.

*Type Locality.* San Diego, California.

*Range.* Kodiak Island, Alaska, to Cape San Lucas, Lower California. Pliocene and Pleistocene of California.

**Olivella pedroana** Conrad 1855, Pacific Railroad Reports, vol. 5, p. 327.

*References.* Oldroyd, 1927a, p. 162; Grant and Gale, 1931, p. 626.

*Type Locality.* San Pedro, California.

*Range.* Puget Sound to Cape San Lucas, Lower California. Miocene of Washington, Oregon, and California; Pliocene of California; Pleistocene of California.

#### Family TURRIDAE

#### Genus *Antiplanes* Dall 1902

NOTE. The genus is treated as a subgenus of *Spirotropis* by Grant and Gale, 1931, p. 552.

**Antiplanes beringi** Aurivillius 1885, Vega Exped. Vetensk. Iakttagelser, vol. 4, p. 354.

*References.* Oldroyd, 1927a, p. 87; Grant and Gale, 1931, p. 555.

*Type Locality.* Bering Sea?

*Range.* Bering Sea, south of St. Lawrence Islands, to Aleutian and Shumagin Islands.

*Remarks.* A synonym of *A. perversa voyi* (Gabb) according to Grant and Gale.

**Antiplanes bulimoides** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 34.

*References.* Oldroyd, 1927a, p. 86; Grant and Gale, 1931, p. 557.

*Type Locality.* Station 4772, on Bowers Bank, Bering Sea, 344 fms.

*Range.* Bowers Bank, Bering Sea; Pliocene, California.

**Antiplanes kamchaticus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 33.

*References.* Oldroyd, 1927a, p. 83; Grant and Gale, 1931, p. 556.

*Type Locality.* Western Bering Sea.

*Range.* Southwestern Bering Sea, in 48 to 100 fms.

*Remarks.* A synonym of *A. perversa voyi* (Gabb) according to Grant and Gale.

**Antiplanes litus** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 34.

*References.* Oldroyd, 1927a, p. 87; Grant and Gale, 1931, p. 558.

*Type Locality.* Station 3194, off Esteros Bay, California, 92 fms.

*Range.* Coast of Washington to Esteros Bay, California.

*Remarks.* Possible for southern British Columbia.



**Antiplanes perversa** Gabb 1865, Proc. Calif. Acad. Sci., vol. 5, p. 183.

*References.* Oldroyd, 1927a, p. 82; Grant and Gale, 1931, p. 554.

*Type Locality.* San Pedro, California, post-Pliocene.

*Range.* Forrester Island, Alaska, to Cortez Banks. Upper Miocene of Oregon and Washington; Middle Pliocene of California; Upper Pliocene of California, Japan?; Pleistocene of California.

**Antiplanes thalaea** Dall 1902, Proc. U. S. Nat. Mus., vol. 24, p. 514.

*Reference.* Oldroyd, 1927a, p. 85.

*Type Locality.* Off San Luis Obispo, California, 252 fms.

*Range.* Unimak Pass, Aleutian Islands, to San Diego, California.

**Antiplanes vinosa** Dall 1874, Proc. Calif. Acad. Sci., vol. 5, p. 253.

*References.* Oldroyd, 1927a, p. 82; Grant and Gale, 1931, p. 555.

*Type Locality.* Kyska Harbor, Alaska.

*Range.* Bering Sea to San Diego, California.

*Remarks.* A synonym of *A. perversa voyi* (Gabb) according to Grant and Gale.

#### Genus *Aforia* Dall 1899

**Aforia circinata** Dall 1873, Proc. Calif. Acad. Sci., vol. 5, p. 61.

*Reference.* Oldroyd, 1927a, p. 63.

*Type Locality.* Nateekin Bay, Captain's Bay, Unalaska.

*Range.* Bering Sea to Straits of Juan de Fuca.

#### Genus *Clathrodrillia* Dall 1918

##### Subgenus *Moniliopsis* Conrad 1865

NOTE. This subgenus is given full generic rank by Grant and Gale, 1931, p. 564.

**Clathrodrillia halcyonis** Dall 1908, Proc. U. S. Nat. Mus., vol. 34, p. 248.

*Reference.* Oldroyd, 1927a, p. 73.

*Type Locality.* Off Coronado Beach, San Diego, California.

*Range.* Burrard Inlet to San Diego, California.

**Clathrodrillia incisa** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 62.

*References.* Oldroyd, 1927a, p. 72; Grant and Gale, 1931, p. 566.

*Type Locality.* Puget Sound.

*Range.* Puget Sound to San Pedro, California. Pleistocene of California.

**Clathrodrillia rhines** Dall 1908, Proc. U. S. Nat. Mus., vol. 56, plate 8, fig. 5.

*Reference.* Oldroyd, 1927a, p. 74.

*Type Locality.* Puget Sound.

*Range.* Puget Sound to San Diego, California.

Subgenus *Suavodrillia* Dall 1918

**Clathrodrillia kennicottii** Dall 1871, Amer. Jour. Conchol., vol. 7, p. 102.

*References.* Oldroyd, 1927a, p. 71; Grant and Gale, 1931, p. 509.

*Type Locality.* North Harbor, Unga Island.

*Range.* Bering Strait to Aleutian Islands. Possible for northern British Columbia and Arctic Canada.

**Clathrodrillia willetti** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 29.

*Reference.* Oldroyd, 1927a, p. 71.

*Type Locality.* Forrester Island, Alaska.

*Range.* Bering Strait to Aleutian Islands. Possible for northern British Columbia and Arctic Canada.

Genus *Cytharella* Monterosato 1875

**Cytharella victoriana** Dall 1897, Bull. Nat. Hist. Soc. British Columbia, No. 2, p. 13.

*Reference.* Oldroyd, 1927a, p. 147.

*Type Locality.* Victoria, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

Genus *Irenosyrinx* Dall 1886

**Irenosyrinx crebristriata** Dall 1908, Bull. Mus. Comp. Zoöl., vol. 43, p. 272.

*Reference.* Oldroyd, 1927a, p. 67.

*Type Locality.* Albatross Station 2859, Pacific Ocean, 1,569 fms.

*Range.* Known only from the type locality.

**Irenosyrinx pacifica** Dall 1908, Bull. Mus. Comp. Zoöl., vol. 43, p. 270.

*References.* Oldroyd, 1927a, p. 67; Grant and Gale, 1931, p. 510.

*Type Locality.* Albatross Station 2859, Pacific Ocean.

*Range.* South of Sitka, Alaska, in 1,569 fms.

*Remarks.* Grant and Gale place this species in the genus *Surculina* Dall.

Genus *Leucosyrinx* Dall 1889

**Leucosyrinx kincaidi** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 6.

*References.* Oldroyd, 1927a, p. 65; Grant and Gale, 1931, p. 508.

*Type Locality.* Shelikoff Strait, north of Kodiak Island.

*Range.* Known only from the type locality.

*Remarks.* Grant and Gale think this species should be placed in the genus *Aforia* Dall.

Genus *Lora* Gistel 1848

NOTE. It is possible that most, if not all, of the species listed under *Lora* should be put under *Oenopota* Mörch 1852. See Bartsch, Paul (1941, Proc. Biol. Soc. Wash., vol. 54, p. 5).

***Lora alaskensis*** Dall 1871, Amer. Jour. Conch., vol. 7, p. 98.

*References.* Oldroyd, 1927a, p. 122; Grant and Gale, 1931, p. 526.

*Type Locality.* Unga Island, Shumagin group, North Harbour, 4 fms.

*Range.* Bering Sea to Puget Sound.

***Lora albrechti*** Krause 1885, Archiv für Naturgeschichte, vol. 51, p. 276.

*References.* Oldroyd, 1927a, p. 106; Grant and Gale, 1931, p. 541.

*Type Locality.* Plover Bay, Bering Strait.

*Range.* Plover Bay, Bering Strait, to Port Etches, Alaska.

*Remarks.* A synonym of *L. expansa* Sars, according to Grant and Gale.

***Lora alitakensis*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 43.

*References.* Oldroyd, 1927a, p. 116; Grant and Gale, 1931, p. 525.

*Type Locality.* Unimak Island, Alaska.

*Range.* Unimak Island, Aleutians, to Alitak Bay, Kodiak, Alaska; Arctic Sea, south to Labrador and Martha's Vineyard.

***Lora althorpensis*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 49.

*Reference.* Oldroyd, 1927a, p. 97.

*Type Locality.* Port Althorp, Alaska, in Granite Cove.

*Range.* Granite Cove, Althorp Island, Alaska.

***Lora amiata*** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 303.

*Reference.* Oldroyd, 1927a, p. 115.

*Type Locality.* Belkoffski, Alaska.

*Range.* Known only from the type locality.

***Lora angulosa*** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 227.

*References.* Whiteaves, 1901a, p. 196; Johnson, 1934, p. 137.

*Type Locality.* Vadsø, Norway.

*Range.* Off Métis, mouth of the St. Lawrence River. Northern Europe.

***Lora arctica*** A. Adams 1855, Proc. Zoöl. Soc. London, 1855, p. 121.

*References.* Oldroyd, 1927a, p. 284; Grant and Gale, 1931, p. 533.

*Type Locality.* Arctic Seas.

*Range.* Shumagin Islands to Chirikoff Island, Alaska. "Norway, Greenland, Newfoundland?, Alaska" according to Grant and Gale.

***Lora beckii*** Möller 1842, Index Moll. Groenl., p. 14.

*Reference.* Oldroyd, 1927a, p. 122.

*Type Locality.* Arctic Coast.

*Range.* Bernard Harbour, Arctic Coast, and eastward.

**Lora bicarinata bicarinata** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 104.

*References.* Verrill, 1873, p. 638; 1882b, p. 481; Whiteaves, 1901a, p. 199; Johnson, 1915, p. 144; Oldroyd, 1927a, p. 110; Grant and Gale, 1931, p. 538; Johnson, 1934, p. 137.

*Type Locality.* East of Nahant, Massachusetts, from stomach of haddock.

*Range.* Point Belcher, Arctic Ocean, to Puget Sound. Circumboreal. Labrador to New York, 6 to 100 fms. Coast of Norway.

**Lora bicarinata exserta** Aurivillius 1885, Vega Exped. Vetenskapsliga Iakttagesler, vol. 4, p. 376.

*References.* Oldroyd, 1927a, p. 110; Grant and Gale, 1931, p. 539.

*Type Locality.* Arctic.

*Range.* Arctic Ocean; Bering Strait to the Aleutians and Cook's Inlet.

**Lora bicarinata violacea** Mighels and Adams 1842, Proc. Boston Soc. Nat. Hist., vol. 1, p. 50.

*References.* Verrill, 1882b, p. 482; Whiteaves, 1901a, p. 199; Johnson, 1915, p. 144; Oldroyd, 1927a, p. 110; Grant and Gale, 1931, p. 540; Johnson, 1934, p. 137.

*Type Locality.* Casco Bay, Maine.

*Range.* Sea Horse Islands, Arctic Ocean, to Bering Sea and Sitka, Alaska. Fossil on Gravina Island. Arctic Ocean south to Norway and Maine.

**Lora cancellata cancellata** Mighels and Adams 1842, Boston Jour. Nat. Hist., vol. 4, p. 52.

*References.* Verrill, 1882b, p. 475; Whiteaves, 1901a, p. 197; Johnson, 1934, p. 137.

*Type Locality.* Casco Bay, Maine.

*Range.* Labrador to Massachusetts, 7 to 312 fms.

**Lora cancellata canadensis** "Verrill and Bush" Whiteaves 1901, Catalogue Mar. Inv. Eastern Canada, p. 197.

*Reference.* Johnson, 1934, p. 137.

*Type Locality.* None designated.

*Range.* Labrador and the Gulf of St. Lawrence south to River Charles, New Brunswick. Pleistocene of Labrador and the Gulf of St. Lawrence.

**Lora chiachiana** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 43.

*References.* Oldroyd, 1927a, p. 119; Grant and Gale, 1931, p. 529.

*Type Locality.* Chiachi Islands, Aleutians.

*Range.* Arctic Ocean to Chiachi Islands and Port Althorp, Alaska.

*Remarks.* A synonym of *L. declivis* (Lovén) according to Grant and Gale.

**Lora decussata decussata** Couthouy 1839, Boston Jour. Nat. Hist., vol. 2, p. 183.

*References.* Hancock, 1846, p. 331; Verrill, 1882b, p. 479; Whiteaves, 1901a, p. 198; Johnson, 1915, p. 142; 1934, p. 137.

*Type Locality.* Massachusetts Bay.

*Range.* Labrador to off Cape Ann, Massachusetts, 10 to 75 fms.

**Lora decussata pusilla** Verrill 1882, Trans. Conn. Acad., vol. 5, p. 481.

*References.* Johnson, 1915, p. 142; 1934, p. 138.

*Type Locality.* Casco Bay, Maine.

*Range.* Halifax Harbour, Nova Scotia, 18 fms.; Frenchman's and Casco bays, Maine, 12 to 15 fms.

**Lora elegans** Möller 1842, Index Moll. Grönl., p. 13.

*References.* Verrill, 1882b, p. 485; Oldroyd, 1927a, p. 111; Grant and Gale, 1931, p. 521; Johnson, 1934, p. 138.

*Type Locality.* Along the Norwegian Coast?

*Range.* Circumboreal. Blizhni Islands to St. Lawrence Island, Bering Sea to San Diego, California, in deep water. Greenland and the Gulf of St. Lawrence.

**Lora exarata** Möller 1842, Index Moll. Grönl., p. 12.

*References.* Verrill, 1882b, p. 467; Whiteaves, 1901a, p. 194; Johnson, 1915, p. 142; Oldroyd, 1927a, p. 101; Grant and Gale, 1931, p. 514; Johnson, 1934, p. 138.

*Type Locality.* Greenland.

*Range.* Circumboreal; south to Monterey, California, in 581 fms. Greenland to off Martha's Vineyard, 5 to 487 fms. Pliocene of England; Pleistocene of England and California.

*Remarks.* Grant and Gale give precedence to the specific name *L. viridulus* (O. Fabr.).

**Lora excurvata** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 63.

*References.* Oldroyd, 1927a, p. 123; Grant and Gale, 1931, p. 532.

*Type Locality.* Puget Sound.

*Range.* Circumboreal; Bristol Bay, Bering Sea, to Puget Sound; south to New England.

**Lora fidicula** Gould 1849, Proc. Boston Soc. Nat. Hist., vol. 3, p. 141.

*Reference.* Oldroyd, 1927a, p. 102.

*Type Locality.* Puget Sound.

*Range.* Aleutian Islands to Bellingham Bay, Puget Sound.

**Lora flora** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 302.

*Reference.* Oldroyd, 1927a, p. 103.

*Type Locality.* Adakh Island, Aleutians.

*Range.* Adakh Island, Aleutians, to Sitka, Alaska. Possible for northern British Columbia.

**Lora galgana** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 303.

*Reference.* Oldroyd, 1927a, p. 105.

*Type Locality.* Station 3330, Bering Sea, north of Unalaska, 351 fms.

*Range.* Unalaska, Aleutian Islands, 351 fms.

**Lora gouldii** Verrill 1882, Trans. Conn. Acad., vol. 5, p. 462.

*References.* Verrill, 1882b, p. 465; Whiteaves, 1901a, p. 196; Johnson, 1915, p. 141; 1934, p. 138.

*Type Locality.* "Massachusetts Bay . . . Gulf of Maine."

*Range.* Off Halifax, Nova Scotia, to Massachusetts Bay, 15 to 122 fms.

*Synonym.* *Bela rugulata* Verrill, *non* Möller.

**Lora harpa** Dall 1884, Proc. U. S. Nat. Mus., vol. 7, p. 523.

*References.* Oldroyd, 1927a, p. 106; Grant and Gale, 1931, p. 531.

*Type Locality.* Nunivak Island, Alaska.

*Range.* Arctic Ocean; circumboreal; south to Queen Charlotte Islands, British Columbia. Pliocene of England; Pleistocene of Alaska.

**Lora harpularia** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 106.

*References.* Verrill, 1882b, p. 473; Whiteaves, 1901a, p. 195; Johnson, 1915, p. 144; Oldroyd, 1927a, p. 112; Grant and Gale, 1931, p. 524; Johnson, 1934, p. 138.

*Type Locality.* From a cod, off Phillips' Point, Lynn, Massachusetts.

*Range.* Point Belcher, Arctic Ocean, to Puget Sound and Monterey, California. Circumboreal. Labrador to off Block Island, Rhode Island, 8 to 190 fms.

**Lora healyi** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 42.

*References.* Oldroyd, 1927a, p. 118; Grant and Gale, 1931, p. 536.

*Type Locality.* Arctic Ocean north of Bering Sea.

*Range.* Known only from the type locality.

**Lora impressa** Mörch 1869, Soc. Malac. Belgique, Mém., No. 4, p. 21.

*References.* Whiteaves, 1901a, p. 199; Oldroyd, 1927a, p. 95; Grant and Gale, 1931, p. 521.

*Type Locality.* Spitsbergen.

*Range.* Circumboreal. Sea Horse Islands, Arctic Ocean, to Kodiak Island, Alaska; south to New England in the Atlantic.

**Lora incisula** Verrill 1882, Trans. Conn. Acad., vol. 5, p. 461.

*References.* Whiteaves, 1901a, p. 198; Johnson, 1915, p. 143; Oldroyd, 1927a, p. 108; Grant and Gale, 1931, p. 532; Johnson, 1934, p. 138; Richards, 1936, p. 540.

*Type Locality.* Labrador.

*Range.* Labrador to off Newport, Rhode Island, 5 to 110 fms. James Bay (Richards). St. Lawrence Bay, Bering Strait (Krause).

*Remarks.* A synonym of *L. excurvata* Cpr., according to Grant and Gale.



**Lora inequita** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 44.

*Reference.* Oldroyd, 1927a, p. 96.

*Type Locality.* Plover Bay, Bering Sea.

*Range.* Plover Bay, Bering Sea, to Boca de Quadra, Alaska.

**Lora inflata** Posselt 1898, Medd. om Grönland, vol. 23, p. 154.

*Reference.* Grant and Gale, 1931, p. 534.

*Type Locality.* Greenland.

*Range.* Circumboreal; Norway, Greenland, Alaska.

*Synonyms.* *L. lawrenceana* and *L. nazanensis* Dall.

**Lora krausei** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 301.

*References.* Oldroyd, 1927a, p. 107; Grant and Gale, 1931, p. 537.

*Type Locality.* Port Etches, Alaska.

*Range.* Known only from the type locality.

*Remarks.* *Lora lotta* and *L. lütkeni* (q.v.) are listed as synonyms by Grant and Gale.

**Lora kyskana** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 47.

*Reference.* Oldroyd, 1927a, p. 97.

*Type Locality.* Kyska Island, Alaska.

*Range.* Kyska Island, Alaska, to Puget Sound.

**Lora laevigata** Dall 1871, Amer. Jour. Conch., vol. 7, p. 98.

*References.* Oldroyd, 1927a, p. 121; Grant and Gale, 1931, p. 535.

*Type Locality.* Norton Sound, Alaska.

*Range.* Circumboreal; Norway; Kotzebue and Norton Sounds to Chirikoff Island, Alaska.

**Lora lawrenceana** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 43.

*References.* Krause, 1886, p. 274 (original description of *L. tenuilirata*); Oldroyd, 1927a, p. 124; Grant and Gale, 1931, p. 534.

*Type Locality.* Plover Bay.

*Range.* Point Belcher, Arctic Ocean, to Pribilof Islands, Bering Sea.

*Synonym.* *L. tenuilirata* Krause 1886.

*Remarks.* A synonym of *L. inflata* Posselt, according to Grant and Gale.

**Lora lotta** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 47.

*References.* Oldroyd, 1927a, p. 104; Grant and Gale, 1931, p. 537.

*Type Locality.* Queen Charlotte Islands, British Columbia.

*Range.* Queen Charlotte Islands to San Diego, California.

*Remarks.* A synonym of *L. krausei* Dall, according to Grant and Gale.

**Lora lutkeana** Krause 1886, Archiv für Naturgeschichte, vol. 51, p. 281.

*References.* Oldroyd, 1927a, p. 108; Grant and Gale, 1931, p. 541.

*Type Locality.* St. Lawrence Bay, Bering Strait.

*Range.* Known only from the type locality.



**Lora lütkeni** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 49.

*References.* Oldroyd, 1927a, p. 107; Grant and Gale, 1931, p. 537.

*Type Locality.* Port Etches, Alaska.

*Range.* Known only from the type locality.

*Remarks.* A synonym of *L. krausei* Dall, according to Grant and Gale.

**Lora maurellei** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 10.

*References.* Oldroyd, 1927a, p. 99; Grant and Gale, 1931, p. 539.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

*Remarks.* A variety of *L. bicarinata* (Couthouy), according to Grant and Gale.

**Lora metschigmensis** Krause 1885, Archiv für Naturgeschichte, vol. 51, p. 276.

*References.* Oldroyd, 1927a, p. 110; Grant and Gale, 1931, p. 523.

*Type Locality.* Metschigme Bay, Bering Strait.

*Range.* Known only from the type locality.

*Remarks.* A variety of *L. reticulata* (Brown), according to Grant and Gale.

**Lora miona** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 47.

*Reference.* Oldroyd, 1927a, p. 102.

*Type Locality.* Boca de Quadra, Alaska.

*Range.* Boca de Quadra, Alaska, to Point Reyes, California.

**Lora mitrata** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 43.

*Reference.* Oldroyd, 1927a, p. 119.

*Type Locality.* Port Clarence, Bering Strait.

*Range.* Bering Strait to Shumagin Islands, Alaska.

**Lora mitrula concinnula** Verrill 1882, Catalogue Marine Moll. N. Engl., p. 468.

*References.* Verrill, 1884, p. 249; Whiteaves, 1901a, p. 194; Johnson, 1915, p. 143; 1934, p. 138.

*Type Locality.* None designated.

*Range.* Labrador to Cape Cod, Massachusetts, 16 to 118 fms.

**Lora mörchi** Leche 1878, Kongl. Svenska Vetensk. Akad., Handl., vol. 16, p. 57.

*Reference.* Oldroyd, 1927a, p. 112.

*Type Locality.* ?

*Range.* Blizhni Islands to St. Lawrence Island, Bering Sea.

**Lora murdochiana** Dall 1919, Proc. U. S. Nat. Mus., vol. 7, p. 524.

*Reference.* Oldroyd, 1927a, p. 119.

*Type Locality.* Cape Smythe, Arctic Ocean.

*Range.* Point Barrow, Arctic Ocean, to Pribilof Islands, Bering Sea.

**Lora nazanensis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 45.

*References.* Oldroyd, 1927a, p. 112; Grant and Gale, 1931, p. 534.

*Type Locality.* Nazan Bay, Atka Island, Aleutians.

*Range.* Norton Sound, Alaska, to Aleutian Islands.

*Remarks.* A synonym of *L. inflata* Posselt, according to Grant and Gale.

**Lora nobilis** Möller 1842, Krøyer's Naturh. Tidskr., vol. 4, p. 85.

*References.* Whiteaves, 1901a, p. 192; Johnson, 1915, p. 141; Oldroyd, 1927a, p. 109; Johnson, 1934, p. 138.

*Type Locality.* Greenland.

*Range.* Arctic Ocean, Bering Sea, off Akutan Pass, 60 fms. Circumboreal. Greenland to Maine, 7 to 15 fms.

**Lora nodulosa** Krause 1886, Archiv für Naturgeschichte, vol. 51, p. 277.

*Reference.* Oldroyd, 1927a, p. 121.

*Type Locality.* St. Lawrence Bay, Bering Strait.

*Range.* St. Lawrence Bay to the Aleutians and Cook's Inlet.

**Lora novaiasemliensis** Leche 1878, Kongl. Svenska Vetensk., Akad. Handl., vol. 16, p. 58.

*Reference.* Oldroyd, 1927a, p. 111.

*Type Locality.* Arctic Ocean.

*Range.* Kara Sea, Arctic Ocean, to north of Bering Strait.

**Lora pavlova** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 43.

*Reference.* Oldroyd, 1927a, p. 115.

*Type Locality.* Station 3607, off Pribilof Islands, Bering Sea, 987 fms.

*Range.* Off Pribilof Islands, Bering Sea.

**Lora pingelii** Möller 1842, Krøyer's Naturh. Tidskr., vol. 4, p. 86.

*References.* Verrill, 1882b, p. 464; Whiteaves, 1901a, p. 196; Johnson, 1915, p. 145; Grant and Gale, 1931, p. 529; Johnson, 1934, p. 138.

*Type Locality.* Greenland.

*Range.* Norway, Greenland; Nova Scotia to Georges Bank, 20 to 90 fms.

**Lora pleurotomaria** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 107.

*References.* Verrill, 1882b, p. 478; Whiteaves, 1901a, p. 199; Johnson, 1915, p. 144; Oldroyd, 1927a, p. 100; Grant and Gale, 1931, p. 528; Johnson, 1934, p. 138.

*Type Locality.* Massachusetts Bay, deep water.

*Range.* Circumboreal. Nunivak Island, Bering Sea, to Puget Sound. Labrador to Martha's Vineyard, Massachusetts, 5 to 255 fms.

*Synonym.* *Bela pyramidalis* auctt.

**Lora popovia** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 42.

*References.* Oldroyd, 1927a, p. 117; Grant and Gale, 1931, p. 519.

*Type Locality.* Bristol Bay, Bering Sea.

*Range.* Bristol Bay, Bering Sea, to Point Pinos, California.

*Remarks.* A variety of *L. turricula* (Mont.), according to Grant and Gale.

**Lora pribilova** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 50.

*References.* Oldroyd, 1927a, p. 98; Grant and Gale, 1931, p. 520.

*Type Locality.* Cape Lisburne, Arctic Ocean.

*Range.* Cape Lisburne, Arctic Ocean, to Esteros Bay, California.

*Remarks.* A variety of *L. turricula* (Mont.), according to Grant and Gale.

**Lora pusilla** Verrill 1882, Catalogue Marine Moll. N. Engl., p. 481.

*References.* Johnson, 1915, p. 142; 1934, p. 138.

*Type Locality.* Casco Bay, Maine.

*Range.* Halifax, Nova Scotia, 18 fms.; Casco Bay, Maine, 12 to 15 fms.

**Lora quadra** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 46.

*References.* Oldroyd, 1927a, p. 97; Grant and Gale, 1931, p. 532.

*Type Locality.* Unalaska, Aleutian Islands.

*Range.* Unalaska Islands to Puget Sound.

*Remarks.* Probably a variety of *L. excurvata* Cpr., according to Grant and Gale.

**Lora rassina** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 303.

*Reference.* Oldroyd, 1927a, p. 117.

*Type Locality.* Station 3305, Bering Sea.

*Range.* Off Bristol Bay, Bering Sea.

**Lora rosea** M. Sars 1846, in Lovén, Index Moll. Scand., p. 12.

*References.* Oldroyd, 1927a, p. 120; Grant and Gale, 1931, p. 518.

*Type Locality.* Bergen, Norway.

*Range.* Circumboreal, south to Norway and Great Britain; Simeonoff Island, Shumagins, to San Juan Islands, Washington. Middle Pliocene, Coralline Crag, England; Upper Pliocene to Pleistocene, California?

**Lora rosea** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 234.

*References.* Verrill, 1882b, p. 485; Whiteaves, 1901a, p. 196; Johnson, 1915, p. 143; Oldroyd, 1927a, p. 120; Johnson, 1934, p. 138.

*Type Locality.* West Coast of Norway.

*Range.* Halifax, Nova Scotia, 15 to 57 fms.

*Synonym.* ?*Bela woodiana* Möller.

*Remarks.* This may be a synonym of *L. rosea* M. Sars 1846, above.

**Lora rugulata spitsbergensis** Friele 1886, North Atl. Exped. Repts., vol. 2, p. 3.

*Reference.* Oldroyd, 1927a, p. 17.

*Type Locality.* Magdalene Bay, Spitsbergen, 40 to 50 fms.

*Range.* Plover Bay to Port Althorp, Alaska. Spitsbergen.

**Lora sarsii** Verrill 1880, Proc. U. S. Nat. Mus., vol. 3, p. 364.

*References.* Verrill, 1882b, p. 484; 1884, p. 250; Whiteaves, 1901a, p. 197; Johnson, 1934, p. 138.

*Type Locality.* Labrador?

*Range.* Labrador and Gulf of St. Lawrence, 10 to 20 fms.

*Synonym.* *Bela cancellata* Sars non Couthouy.

**Lora scalaris scalaris** Möller 1842, Index Moll. Grönl., p. 12.

*References.* Verrill, 1882b, p. 471; Whiteaves, 1901a, p. 193; Johnson, 1915, p. 141; Oldroyd, 1927a, p. 96; Johnson, 1934, p. 138.

*Type Locality.* Greenland.

*Range.* Greenland to Massachusetts Bay, 10 to 190 fms. Bering Sea to Sitka, Alaska. Circumboreal.

*Synonym.* *Bela turricula* auctt.

**Lora scalaris americana** Packard 1867, Mem. Boston Soc. Nat. Hist., vol. 1, p. 285.

*References.* Johnson, 1915, p. 141; Grant and Gale, 1931, p. 537; Richards, 1936, p. 540.

*Type Locality.* Labrador.

*Range.* Labrador to James Bay (Richards).

*Remarks.* This is a synonym of *L. scalaris* Möller according to Johnson (1915, p. 141). It is included here because of Richard's record which implies that the subspecies is valid.

**Lora scalaris ecarinata** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 229.

*Reference.* Johnson, 1934, p. 138.

*Type Locality.* "Hasvig i Vestfinmarken".

*Range.* Labrador, 5 fms. Norway.

**Lora simplex** Middendorff 1849, Beitr. Malac. Rossica, vol. 2, p. 119.

*References.* Oldroyd, 1927a, p. 120; Grant and Gale, 1931, p. 536.

*Type Locality.* Okhotsk Sea.

*Range.* Circumboreal; south to Point Barrow, Arctic Ocean, to Pribilof Islands and the Okhotsk Sea; south to Ireland and the Gulf of St. Lawrence. Pliocene of England.

**Lora solida** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 301.

*References.* Oldroyd, 1927a, p. 116; Grant and Gale, 1931, p. 525.

*Type Locality.* Kyska Harbour, Alaska.

*Range.* Bering Sea to Puget Sound.

**Lora tabulata** Carpenter 1865, Ann. Mag. Nat. Hist., ser. 3, vol. 15, p. 29.

*References.* Oldroyd, 1927a, p. 101; Grant and Gale, 1931, p. 520.

*Type Locality.* Neah Bay, Washington.

*Range.* Sitka, Alaska, to Monterey, California. Upper Miocene of Washington; Upper Pliocene of California; Pliocene and Pleistocene of California ?

**Lora tenuicostata** M. Sars 1868, Norske Vidensk. Förh., 1868, p. 259.

*References.* Verrill, 1882b, p. 481; 1885, p. 419; Oldroyd, 1927a, p. 103; Grant and Gale, 1931, p. 540; Johnson, 1934, p. 138.

*Type Locality.* Vadsø, Norway.

*Range.* Circumboreal, south to St. Lawrence and Nunivak islands, Bering Sea to Safety Cove, Alaska; south to Norway and Maine.

**Lora tenuilirata tenuilirata** Dall 1871, Amer. Jour. Conch., vol. 7, p. 98.

*References.* Oldroyd, 1927a, p. 118; Grant and Gale, 1931, p. 535.

*Type Locality.* Norton Sound, Alaska, Fort of St. Michael.

*Range.* Circumboreal; south to Point Barrow, Arctic Ocean, to Shumagin Islands, Alaska; south to Norway and Rhode Island.

*Remarks.* A variety of *L. laevigata* Dall, according to Grant and Gale.

**Lora tenuilirata cymata** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 42.

*Reference.* Oldroyd, 1927a, p. 118.

*Type Locality.* Nunivak Island, Bering Sea.

*Range.* Nunivak Island, Bering Sea, to Shumagin Islands.

**Lora tenuissima** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 50.

*References.* Oldroyd, 1927a, p. 105; Grant and Gale, 1931, p. 537.

*Type Locality.* Chernoffski Harbour, Unalaska Island, Alaska, 109 fms.

*Range.* Known only from the type locality.

*Remarks.* A synonym of *L. schmidtii* Friele, according to Grant and Gale. If they are correct, the range is "Arctic, from Norway to Alaska".

**Lora trevelliiana** Turton 1834, Ann. Mag. Nat. Hist., vol. 7, p. 351.

*References.* Sars, 1878, p. 235; Verrill, 1882b, p. 484; Oldroyd, 1927a, p. 123; Grant and Gale, 1931, p. 522; Johnson, 1934, p. 139.

*Type Locality.* Scarborough, England.

*Range.* Circumboreal. Arctic Ocean southward to Behm Canal, Alaska and San Diego, California; south to Gulf of St. Lawrence; Gulf of Maine. Middle Pliocene to Pleistocene of England.

*Remarks.* Placed in the synonymy of *L. reticulata* (Brown) by Grant and Gale.

**Lora turricula turricula** Montagu 1803, Testac. Britann., p. 262.

*References.* Oldroyd, 1927a, p. 115; Grant and Gale, 1931, p. 515.

*Type Locality.* Sandwich, Kent, England.

*Range.* Icy Cape, Arctic Ocean to Puget Sound; Bristol Channel, western and eastern parts of England and Wales; on all the Irish, Scottish, and Icelandic coasts.

**Lora turricula schneideri** Harmer 1915, Mon. Palaeont. Soc., vol. 68, Plio. Moll. Gt. Britain, vol. 1, p. 284.

*Reference.* Grant and Gale, 1931, p. 518.

*Type Locality.* Pliocene of England.

*Range.* Granite Cove, Port Althorp, Alaska ?. Middle and Upper Pliocene, Lower and Upper Pleistocene of Great Britain and California.

*Synonyms.* ?*Mangilia althorpi* Dall 1919 and ?*M. granitica* Dall 1919, according to Grant and Gale.

**Lora woodiana** Möller 1848, Index Moll. Grönl., p. 13.

*Reference.* Whiteaves, 1901a, p. 195; Oldroyd, 1927a, p. 111.

*Type Locality.* Arctic.

*Range.* White Island, Arctic Ocean, to north of Bering Sea.

#### Genus *Mangelia* Risso 1826

**Mangelia aleutica** Dall 1871, Amer. Jour. Conch., vol. 7, p. 99.

*References.* Oldroyd, 1927a, p. 132; Grant and Gale, 1931, p. 527.

*Type Locality.* Unga Island, Shumagin group, North Harbour.

*Range.* Cape Sabine, Arctic Ocean, to Straits of Juan de Fuca.

*Remarks.* Placed in genus *Lora* by Grant and Gale.

**Mangelia althorpi** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 68.

*References.* Oldroyd, 1927a, p. 135; Grant and Gale, 1931, p. 518.

*Type Locality.* Granite Cove, Port Althorp, Alaska.

*Range.* Known only from the type locality.

*Remarks.* A synonym of *Lora turricula* var. *schneideri* (Harmer), according to Grant and Gale.

**Mangelia barbarensis** Oldroyd 1924, Univ. Wash. Publ. Puget Sd. Biol. Sta., vol. 4, p. 82.

*References.* Carpenter, 1865, p. 395 (original description of *M. angulata*); Oldroyd, 1927a, p. 132; Grant and Gale, 1931, p. 594.

*Type Locality.* Santa Barbara, California.

*Range.* Puget Sound to Gulf of California.

*Synonym.* *M. angulata* Carpenter 1865 non Reeve 1846.

*Remarks.* A synonym of *M. hecetae* Dall and Bartsch, according to Grant and Gale.

**Mangelia carlotta** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 65.

*Reference.* Oldroyd, 1927a, p. 133.

*Type Locality.* Station 2860 off Queen Charlotte Islands, British Columbia.

*Range.* Off Queen Charlotte Islands, British Columbia, 876 fms.

**Mangelia eriopis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 67.

*Reference.* Oldroyd, 1927a, p. 134.

*Type Locality.* Forrester Island, Alaska.

*Range.* Forrester Island, Alaska, to Queen Charlotte Islands, British Columbia.



**Mangelia granitica** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 67.

*Reference.* Oldroyd, 1927a, p. 134.

*Type Locality.* Granite Cove, Port Althorp, Alaska.

*Range.* Known only from the type locality.

**Mangelia nunivakensis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 65.

*References.* Oldroyd, 1927a, p. 133; Grant and Gale, 1931, p. 527.

*Type Locality.* Bering Sea, near Nunivak Island.

*Range.* Known only from the type locality. Doubtfully, to San Pedro, in deep water, according to Grant and Gale.

**Mangelia sculpturata** Dall 1886, Proc. U. S. Nat. Mus., vol. 9, p. 299.

*References.* Oldroyd, 1927a, p. 135; Grant and Gale, 1931, p. 527.

*Type Locality.* Aleutian Islands.

*Range.* Chiachi Islands to Port Etches, Alaska.

*Remarks.* Placed in genus *Lora* by Grant and Gale.

#### Section *Clathromangilia* Monterosato 1884

**Mangelia crebricostata** Carpenter 1865, Ann. Mag. Nat. Hist., 3rd ser., vol. 15, p. 28.

*References.* Oldroyd, 1927a, p. 145; Grant and Gale, 1931, p. 593.

*Type Locality.* Neah Bay, Washington.

*Range.* Forrester Island, Alaska, to Monterey, California.

**Mangelia interfossa** Carpenter 1865, Ann. Mag. Nat. Hist., 3rd ser., vol. 15, p. 29.

*References.* Oldroyd, 1927a, p. 144; Grant and Gale, 1931, p. 598.

*Type Locality.* Neah Bay, Washington.

*Range.* Vancouver Island, British Columbia, to Catalina Island, California. Pliocene and Pleistocene of California.

**Mangelia levidensis** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 63.

*References.* Oldroyd, 1927a, p. 144; Grant and Gale, 1931, p. 526.

*Type Locality.* Puget Sound.

*Range.* Bering Strait to Monterey, California.

*Remarks.* Placed in the genus *Lora* by Grant and Gale.

#### Section *Kurtzilla* Dall 1918

**Mangelia arteaga** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 11.

*References.* Oldroyd, 1927a, p. 140; Grant and Gale, 1931, p. 595.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Vancouver Island, British Columbia, to San Diego, California. Pleistocene of California.



**Mangelia hecetae** Dall and Bartsch 1910, Geol. Surv. Canada, Mem. 14N, p. 10.

*References.* Oldroyd, 1927a, p. 141; Grant and Gale, 1931, p. 593.

*Type Locality.* Barkley Sound, Vancouver Island, British Columbia.

*Range.* Vancouver Island, British Columbia, to Gulf of California. Upper Pliocene and Pleistocene of California.

**Mangelia newcombei** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 71.

*References.* Oldroyd, 1927a, p. 141; Grant and Gale, 1931, p. 593.

*Type Locality.* Clayoquot Sound, Vancouver Island, British Columbia.

*Range.* Vancouver Island, British Columbia, to Drake's Bay, California.

#### Genus *Oenopota* Mörch 1852

NOTE. It is possible that most, if not all, of the species listed in this catalogue under *Lora* belong under *Oenopota* Mörch. See Bartsch, Paul (1941, Proc. Biol. Soc. Wash., vol. 54, p. 5).

#### Genus *Pleurotomella* Verrill 1872

**Pleurotomella packardii** Verrill 1873, Amer. Jour. Sci., 3rd ser., vol. 5, p. 15.

*References.* Verrill, 1882b, p. 453; Johnson, 1915, p. 146; 1934, p. 139.

*Type Locality.* N. lat. 42° 5', W. long. 67° 45'; 110 fms.

*Range.* Gulf of Maine, 85 to 110 fms. Off Cape Cod, 96 fms.

#### Subgenus *Gymnobela* Verrill 1884

**Pleurotomella brevis** Verrill 1885, Trans. Conn. Acad., vol. 6, p. 417.

*References.* Johnson, 1915, p. 146; 1934, p. 140.

*Type Locality.* Not specified.

*Range.* Off Cape Sable, Nova Scotia, 1,290 fms. South of Martha's Vineyard, 1,608 fms.

*Synonym.* *P. blakeana* Dall.

#### Genus *Taranis* Jeffreys 1870

**Taranis cirrata tornata** Verrill 1884, Trans. Conn. Acad., vol. 6, p. 251.

*Reference.* Johnson, 1934, p. 144.

*Type Locality.* Off Cape Sable, Nova Scotia, 1,255 fms.

*Range.* Known only from the type locality.

**Taranis strongi** Arnold 1903, Paleont. of San Pedro, Calif., p. 215.

*References.* Oldroyd, 1927a, p. 151; Grant and Gale, 1931, p. 572.

*Type Locality.* Lower San Pedro series, Deadman Island, California.

*Range.* Forrester Island, Alaska, to San Diego, California. Pleistocene of California.

## Family CANCELLARIIDAE

Genus *Cancellaria* Lamarck 1799Subgenus *Sveltia* Jousseaume 1888***Cancellaria circumcincta*** Dall 1873, Proc. Calif. Acad. Sci., vol. 5, p. 59.*Reference.* Oldroyd, 1927a, p. 155.*Type Locality.* Popoff Strait, Shumagin Islands, Alaska.*Range.* Unalaska to Point Etches, Alaska. Possible for northern British Columbia.***Cancellaria modesta*** Carpenter 1865, Ann. Mag. Nat. Hist. (3), vol. 15, p. 32.*References.* Oldroyd, 1927a, p. 154; Grant and Gale, 1931, p. 522.*Type Locality.* Neah Bay, Washington.*Range.* Aleutian Islands, Alaska, to Neah Bay, Puget Sound. Pliocene of California.*Remarks.* Placed in genus *Admete* by Grant and Gale.***Cancellaria unalaskensis*** Dall 1873, Proc. Calif. Acad. Sci., vol. 5, p. 58.*References.* Oldroyd, 1927a, p. 155; Grant and Gale, 1931, p. 623.*Type Locality.* Captain's Harbor, Unalaska, 30 to 60 fms.*Range.* Unalaska, Alaska, to Cape Blanco, Oregon.*Remarks.* "May prove to be the young" of *C. modesta* Cpr., (q.v.) according to Grant and Gale.Genus *Admete* Kröyer 1842***Admete couthouyi couthouyi*** Jay 1839, Catal. Coll., p. 77.*References.* Whiteaves, 1901a, p. 191; Johnson, 1915, p. 140; Oldroyd, 1927a, p. 157; Grant and Gale, 1931, p. 622; Johnson, 1934, p. 144.*Type Locality.* Massachusetts Bay.*Range.* Arctic Sea to San Diego, California. Circumboreal. Labrador to Massachusetts Bay, 10 to 60 fms. Pliocene and Pleistocene of California.***Admete couthouyi gracilior*** Carpenter 1866, in Gabb, Paleont. Calif., vol. 2, p. 50.*Reference.* Oldroyd, 1927a, p. 158.*Type Locality.* Santa Barbara, California, post-Pliocene.*Range.* Arctic Sea to San Diego, California. Pleistocene of California.***Admete couthouyi laevior*** Leche 1878, Kongl. Svenska Vetensk. Akad. Handl., vol. 16, p. 43.*Reference.* Oldroyd, 1927a, p. 158.*Type Locality.* Arctic.*Range.* Arctic Ocean to Sea Lion Rock, Washington, and off San Juan Islands, Puget Sound.

**Admete elongata** Leche 1878, K. Svensk. Vet. Akad. Handl., vol. 16, No. 2, p. 48.

*Reference.* Dall, 1919b, p. 21A.

*Type Locality.* Arctic.

*Range.* Off Sea Horse Islands, Alaska, N. latitude 70° 24', 9 to 10 fms.

**Admete middendorffiana** Dall 1884, Proc. U. S. Nat. Mus., vol. 7, p. 524.

*Reference.* Oldroyd, 1927a, p. 156.

*Type Locality.* Nunivak Island, Arctic.

*Range.* Arctic coast of Alaska to Bristol Bay, Bering Sea.

**Admete regina** Dall 1911, Nautilus, vol. 25, p. 16.

*Reference.* Oldroyd, 1927a, p. 156.

*Type Locality.* Plover Bay, Bering Sea, 25 fms.

*Range.* Arctic Sea to Pribilof Islands.

#### Subclass OPISTHOBRANCHIA

##### Order Pleurocoela

##### Family ACTAEONIDAE

##### Genus *Actaeon* Montfort 1810

##### Subgenus *Rictaxis* Dall 1871

**Actaeon punctocoelatus vancouverensis** Oldroyd 1927, Marine Shells West Coast N. A., vol. 2, pt. 1, p. 25.

*Reference.* Grant and Gale, 1931, p. 443.

*Type Locality.* Departure Bay, Vancouver Island, British Columbia, in 3 fms.

*Range.* Known only from the type locality.

*Remarks.* Grant and Gale do not consider the variety *vancouverensis* valid. If they are correct, the Canadian records should go under the species *A. punctocoelatus* (Carpenter), and the range would be "Vancouver Island and California (Recent) and Pleistocene of California." Grant and Gale cite no records between Vancouver Island and California.

##### Genus *Microglyphis* Dall 1902

**Microglyphis estuarinus** Dall 1908, Bull. Mus. Comp. Zoöl., vol. 43, no. 6, p. 238.

*Reference.* Oldroyd, 1927a, p. 26.

*Type Locality.* Albatross Station 3194, off Estero Bay, California, 92 fms.

*Range.* Straits of Juan de Fuca to Gulf of California.

## Family ACTEOCINIDAE

Genus *Acteocina* Gray 1847

**Acteocina canaliculata** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 240.

*References.* Whiteaves, 1901a, p. 204; Johnson, 1915, p. 147; 1934, p. 145.

*Type Locality.* Southern Coast of the United States.

*Range.* Prince Edward Island to Florida and Texas.

**Acteocina culcitella culcitella** Gould 1853, Boston Jour. Nat. Hist., vol. 6, p. 377.

*References.* Oldroyd, 1927a, p. 27; Grant and Gale, 1931, p. 447.

*Type Locality.* Santa Barbara, California.

*Range.* Kodiak Island, Alaska, to California. Pliocene and Pleistocene of California.

**Acteocina culcitella eximia** Baird 1863, Proc. Zool. Soc. London, 1863, p. 67.

*References.* Oldroyd, 1927a, p. 28; Willett, 1928, p. 37; Grant and Gale, 1931, p. 448.

*Type Locality.* Esquimalt Harbour, Vancouver Island, British Columbia.

*Range.* Kodiak Island, Alaska, to Puget Sound. Pliocene and Pleistocene of California.

**Acteocina oldroydi** Dall 1925, Nautilus, vol. 39, p. 25.

*Reference.* Oldroyd, 1927a, p. 28.

*Type Locality.* Departure Bay, British Columbia.

*Range.* Known only from the type locality.

Genus *Volvulella* Newton 1891

**Volvulella cylindrica** Carpenter 1864, Rept. Brit. Assoc. Adv. Sci. for 1863, p. 647.

*References.* Oldroyd, 1927a, p. 34; Grant and Gale, 1931, p. 450.

*Type Locality.* Santa Barbara, California.

*Range.* Vancouver Island, British Columbia, to the Gulf of California. Pleistocene of California.

Genus *Retusa* Brown 1827

**Retusa gouldii** Couthouy 1839, Boston Jour. Nat. Hist., vol. 2, p. 181.

*References.* Whiteaves, 1901a, p. 203; Johnson, 1915, p. 148; 1934, p. 146.

*Type Locality.* Massachusetts Bay.

*Range.* Maine to North Carolina, 5 to 22 fms.

**Retusa mayoi** Dall 1889, Bull. Mus. Comp. Zoöl., vol. 18, p. 46.

*References.* Johnson, 1915, p. 148; 1934, p. 146.

*Type Locality.* Portland, Maine, from the stomach of a haddock.

*Range.* Known only from the type locality.

**Retusa nitidula** Lovén 1846, Index Moll. Scand., p. 10.

*References.* Verrill, 1882b, p. 543; Whiteaves, 1901a, p. 203; Johnson, 1934, p. 146.

*Type Locality.* Bohus, Norway.

*Range.* Gulf of St. Lawrence, 200 fms. Norway.

**Retusa obtusa obtusa** Montagu 1808, Testacea Britannica, vol. 1, p. 223.

*References.* Oldroyd, 1927a, p. 32; Johnson, 1934, p. 146.

*Type Locality.* England.

*Range.* Arctic Ocean to St. Matthew Island. Circumboreal. Greenland.

**Retusa obtusa turrita** Möller 1842, Krøyer's Naturh. Tidskr., vol. 4, p. 79.

*References.* Johnson, 1915, p. 148; 1934, p. 146.

*Type Locality.* Greenland.

*Range.* Greenland; Maine?

**Retusa pertenuis** Mighels 1843, Boston Jour. Nat. Hist., vol. 4, p. 346.

*References.* Whiteaves, 1901a, p. 203; Johnson, 1915, p. 147; Oldroyd, 1927a, p. 32; Johnson, 1934, p. 146.

*Type Locality.* Casco Bay, Maine.

*Range.* Greenland to Fernandina, Florida, 10 to 294 fms. Arctic Ocean; Bering Sea.

**Retusa semen** Reeve 1855, Belcher, Last of the Arctic Voyages, vol. 2, p. 393.

*Reference.* Oldroyd, 1927a, p. 32.

*Type Locality.* Port Refuge, Nova Zembla.

*Range.* Off Point Collinson, Arctic. Atlantic.

#### Subgenus *Coleophysis* Fischer 1883

NOTE. Johnson (1934, p. 146) makes this a subgenus of *Acteocina*.

**Retusa harpa** Dall 1871, Amer. Jour. Conch., vol. 7, p. 136.

*References.* Oldroyd, 1927a, p. 33; Grant and Gale, 1931, p. 446.

*Type Locality.* Monterey, California.

*Range.* Queen Charlotte Islands, British Columbia, to San Diego, California. Pleistocene of California.

Subgenus *Pyrunculus* Pilsbry 1894

**Retusa ovata** Jeffreys 1870, Rept. Brit. Assoc. Porcupine Exped., p. 156.

*References.* Verrill, 1882b, p. 543; Johnson, 1934, p. 146.

*Type Locality.* Coralline Crag, Sutton, England.

*Range.* North Atlantic to Florida Strait, 124 to 465 fms. Europe.

*Synonym.* *Utriculus conulus* G. O. Sars 1878.

## Family SCAPHANDRIDAE

Genus *Scaphander* Montfort 1810

**Scaphander punctostriatus** Mighels 1841, Proc. Boston Soc. Nat. Hist., vol. 1, p. 49.

*References.* Whiteaves, 1901a, p. 201; Johnson, 1915, p. 149; 1934, p. 146.

*Type Locality.* Casco Bay, Maine.

*Range.* Gulf of St. Lawrence to the West Indies, 46 to 1,476 fms.

**Scaphander willetti** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 299.

*Reference.* Oldroyd, 1927a, p. 35.

*Type Locality.* Forrester Island, Alaska.

*Range.* Known only from the type locality.

Genus *Cylichna* Lovén 1847Subgenus *Bullinella* Newton 1891

**Cylichna alba alba** Brown 1827, Illustr. Conchol. of Great Britain, p. 3, pl. 19, figs. 43, 44.

*References.* Verrill, 1873, p. 663; Whiteaves, 1901a, p. 202; Johnson, 1915, p. 150; Oldroyd, 1927a, p. 39; Grant and Gale, 1931, p. 453; Johnson, 1934, p. 147.

*Type Locality.* Greenock, Scotland.

*Range.* Circumboreal. Greenland to Block Island, Rhode Island, and North Carolina (10 to 1,091 fms.). Arctic Ocean to San Diego, California. Pliocene and Pleistocene of California.

**Cylichna alba corticata** Beck 1842, Index Moll. Groenl., p. 6.

*References.* Posselt, 1898, p. 242; Johnson, 1934, p. 147.

*Type Locality.* Greenland.

*Range.* Greenland.

**Cylichna attonsa** Carpenter 1865, Proc. Acad. Nat. Sci. Phila., 1865, p. 58.

*References.* Oldroyd, 1927a, p. 40; Grant and Gale, 1931, p. 454.

*Type Locality.* Puget Sound.

*Range.* Puget Sound to San Diego, California. Pleistocene of Oregon.

**Cylichna diegensis** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 300.

*References.* Oldroyd, 1927a, p. 40; Grant and Gale, 1931, p. 454.

*Type Locality.* U. S. Fish Comm. Station 4359, off Point Loma, San Diego County, California.

*Range.* Vancouver Island, British Columbia; San Diego, California, to Cape San Lucas.

**Cylichna nucleola** Reeve 1855, Last of the Arctic Voyages, vol. 2, p. 393.

*Reference.* Oldroyd, 1927a, p. 39.

*Type Locality.* North of Beechey Island, Arctic Ocean.

*Range.* Circumboreal; Grantly Harbour, Port Clarence, Bering Strait, Alaska.

**Cylichna occulta** Mighels 1841, Proc. Boston Soc. Nat. Hist., vol. 1, p. 50.

*References.* Whiteaves, 1901a, p. 203; Johnson, 1915, p. 150; Oldroyd, 1927a, p. 39; Johnson, 1934, p. 147.

*Type Locality.* Westbrook, Maine.

*Range.* Point Barrow, Aleutian Islands; circumboreal; Greenland to Maine.

#### Subgenus *Cylichnella* Gabb 1872

**Cylichna oryza** Totten 1835, Amer. Jour. Sci., vol. 28, p. 350.

*References.* Verrill, 1873, p. 663; Johnson, 1915, p. 150; 1934, p. 147.

*Type Locality.* Newport Harbor, Rhode Island.

*Range.* Maine to Connecticut, 2 to 4 fms.

#### Genus *Diaphana* Brown 1827

**Diaphana brunnea** Dall 1919, Proc. U. S. Nat. Mus., vol. 56, p. 299.

*Reference.* Oldroyd, 1927a, p. 37.

*Type Locality.* St. Paul Harbour, Kodiak Island, Alaska.

*Range.* Kodiak Island, Alaska.

**Diaphana debilis** Gould 1840, Amer. Jour. Sci., 1st ser., vol. 38, p. 196.

*References.* Verrill, 1873, p. 663; Whiteaves, 1901a, p. 202; Johnson, 1915, p. 149; 1934, p. 147.

*Type Locality.* None given.

*Range.* Greenland to Connecticut, 6 to 16 fms.

**Diaphana globosa** Lovén 1846, Öfvers. Kongl. Vet.-Akad. Förh., vol. 3, p. 143.

*References.* Verrill, 1882b, p. 543; Johnson, 1915, p. 149; Oldroyd, 1927a, p. 37; Johnson, 1934, p. 147.

*Type Locality.* Scandinavia.

*Range.* Bering Sea and Arctic Ocean; circumboreal. Off Martha's Vineyard, Massachusetts, 115 to 364 fms.



**Diaphana hiemalis** Couthouy 1839, Boston Jour. Nat. Hist., vol. 2, p. 180.

*References.* Whiteaves, 1901a, p. 202; Johnson, 1915, p. 149; 1934, p. 147.

*Type Locality.* Off Provincetown, Massachusetts.

*Range.* Maine to Massachusetts, 10 to 40 fms.

#### Family AKERIDAE

##### Genus *Haminoea* Turton 1830

**Haminoea cymbiformis** Carpenter 1857, Cat. Reigen Coll. Mazatlan Moll., Brit. Mus., p. 174.

*References.* Oldroyd, 1927a, p. 42 (*H. virescens*); Grant and Gale, 1931, p. 458.

*Type Locality.* Mazatlan, Mexico.

*Range.* Puget Sound; California.

*Synonym.* *H. virescens* auctt. non Sowerby.

**Haminoea solitaria** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 245.

*References.* Whiteaves, 1901a, p. 201; Johnson, 1915, p. 151; 1934, p. 148.

*Type Locality.* "Southern Coast of the United States."

*Range.* Pointe du Chêne, Shediac Bay, New Brunswick, to Massachusetts Bay and Georgia. Fossil in the Leda Clay at Montreal.

**Haminoea vesicula** Gould 1855, Pacific Railroad Surveys, Appendix 5, p. 334.

*References.* Oldroyd, 1927a, p. 42; Grant and Gale, 1931, p. 460.

*Type Locality.* San Diego, California.

*Range.* Southeastern Alaska to Gulf of California.

#### Family RINGICULIDAE

##### Genus *Ringicula* Deshayes 1838

**Ringicula nitida** Verrill 1873, Amer. Jour. Sci., 3rd ser., vol. 5, p. 16.

*References.* Verrill, 1882b, p. 540; Johnson, 1915, p. 151; 1934, p. 149.

*Type Locality.* North of the Georges Bank, N. lat. 42° 5', West long. 67° 49', 110 and 150 fms.

*Range.* Gulf of Maine, 100 fms., to Florida and Gulf of Mexico, 339 to 447 fms.

#### Family PHILINIDAE

##### Genus *Philine* Ascanius 1772

**Philine cingulata** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 297.

*References.* Whiteaves, 1901a, p. 201; Johnson, 1915, p. 152; 1934, p. 149.

*Type Locality.* Lofoten, Norway, 120 to 200 fms.

*Range.* Off Cape Sable, Nova Scotia, 90 fms.

**Philine finmarchia** M. Sars 1878, *in* Moll. Reg. Arct. Norv., p. 296.

*References.* Whiteaves, 1901a, p. 201; Johnson, 1915, p. 153; 1934, p. 149.

*Type Locality.* Finmark.

*Range.* Off Cape Sable, Nova Scotia, to Martha's Vineyard, Massachusetts, 16 to 90 fms.

**Philine fragilis** G. O. Sars 1878, Moll. Reg. Arct. Norv., p. 296.

*References.* Whiteaves, 1901a, p. 201; Johnson, 1915, p. 153; 1934, p. 149.

*Type Locality.* Vadsø, Norway.

*Range.* Off Cape Sable, Nova Scotia, 90 fms., Jeffreys Ledge, Gulf of Maine, 88 to 92 fms. Northern Europe.

**Philine lima** Brown 1844, *Illustr. Recent Conch. Great Britain*, ed. 2, p. 58.

*References.* Whiteaves, 1901a, p. 200; Johnson, 1915, p. 152; 1934, p. 149.

*Type Locality.* Greenock, Scotland.

*Range.* Grand Manan Island to Cape Cod, Massachusetts. Northern Europe.

**Philine polaris** Aurivillius 1885, *Vega Exped.*, vol. 4, p. 380.

*Reference.* Oldroyd, 1927a, p. 44.

*Type Locality.* 73° 5' N., 144° 20' E. and 70° 28' N., 164° 10' E., 8 to 9 fms.

*Range.* Arctic Sea to Nanaimo, Vancouver Island, British Columbia.

**Philine quadrata** Wood 1839, *Charlesworth's Mag. Nat. Hist.*, vol. 3, p. 461.

*References.* Whiteaves, 1901a, p. 200; Johnson, 1915, p. 152; 1934, p. 149.

*Type Locality.* Coralline Crag, Sutton, England.

*Range.* Greenland to off New England and North Carolina, 20 to 400 fms. Northern Europe. Pliocene of England.

**Philine scabra** Müller 1784, *Zoöl. Danica*, II, p. 90.

*Reference.* Johnson, 1934, p. 149.

*Type Locality.* Not located.

*Range.* Greenland.

**Philine sinuata** Stimpson 1850, *Proc. Boston Soc. Nat. Hist.*, vol. 3, p. 333.

*References.* Johnson, 1915, p. 151; Oldroyd, 1927a, p. 44; Johnson, 1934, p. 149.

*Type Locality.* Broad Bay, Boston Harbour, 4 to 7 fms.

*Range.* Port Clarence, Bering Strait. Maine to Massachusetts, 4 to 7 fms.

## Family GASTROPTERIDAE

Genus *Gastropteron* Kosse 1813**Gastropteron pacificum** Bergh 1893, Zoöl. Jahrbuch, vol. 7, p. 303.*Reference.* Oldroyd, 1927a, p. 45.*Type Locality.* Unalaska, Aleutian Islands.*Range.* Aleutian Islands to Fuca Strait.**Gastropteron** (*pacificum* var.?) **cinereum** Dall 1925, Rept. Can. Arctic Exped., vol. 8, p. 11B.*Reference.* Oldroyd, 1927a, p. 46.*Type Locality.* Skidegate Inlet, Queen Charlotte Islands, British Columbia.*Range.* Queen Charlotte Islands to Vancouver Island, British Columbia.

## Family AGLAJIDAE

Genus *Aglaja* Renier 1804**Aglaja adellae** Dall 1894, Nautilus, vol. 8, p. 73.*Reference.* Oldroyd, 1927a, p. 48.*Type Locality.* Eagle Harbour, Puget Sound, 20 fms.*Range.* Known only from the type locality.**Aglaja diomedia** Bergh 1894, Bull. Mus. Comp. Zoöl., vol. 25, p. 211.*Reference.* Oldroyd, 1927a, p. 47.*Type Locality.* Alaska.*Range.* Shumagin and Kodiak islands, Alaska.**Aglaja ocelligera** Bergh 1894, Bull. Mus. Comp. Zoöl., vol. 25, p. 211.*Reference.* Oldroyd, 1927a, p. 47.*Type Locality.* Sitka Harbor, Alaska.*Range.* Known only from the type locality.

## Order Pteropoda

## Family LIMACINIDAE

Genus *Limacina* Cuvier 1817**Limacina helicina** Phipps 1774, Voy. to the North Pole, p. 195.*References.* Johnson, 1915, p. 155; 1934, p. 150; Kerswill, 1940, pp. 23-31.*Type Locality.* "Arctic Seas."*Range.* Pelagic. Arctic Seas (Ellesmere Island) to the Gulf of Maine.**Limacina helicoides** Jeffreys 1877, Ann. Mag. Nat. Hist., 4th ser., vol. 19, p. 338.*Reference.* Johnson, 1934, p. 150.*Type Locality.* Not specified.*Range.* Pelagic. Off Davis Strait, N. 56° 11', W. 37° 41'.

**Limacina retroversa** Fleming 1823, Mem. Wern. Nat. Hist. Soc., vol. 4, p. 498.

*References.* Verrill, 1873, p. 669; Whiteaves, 1901a, p. 208; Johnson, 1915, p. 154; 1934, p. 150; Kerswill, 1940, pp. 23-31.

*Type Locality.* "Noss Island, Zetland."

*Range.* Pelagic. Davis Strait to Massachusetts.

*Synonym.* *L. balea* Möller 1842.

#### Family SPIRATELLIDAE

Genus *Spiratella* Blainville 1817

**Spiratella pacifica** Dall 1871, Amer. Jour. Conch., vol. 7, p. 138.

*Reference.* Oldroyd, 1927a, p. 18.

*Type Locality.* Monterey, California.

*Range.* Point Barrow, Arctic Ocean, to Monterey, California.

#### Family CAVOLINIIDAE

Genus *Cavolina* Abildgaard 1791

**Cavolina occidentalis** Dall 1908, Bull. Mus. Comp. Zool., vol. 43, p. 233.

*References.* Oldroyd, 1927a, p. 19; Grant and Gale, 1931, p. 441 (as *C. telemus tricuspidata* (Rivers)).

*Type Locality.* N. E. Pacific between latitudes 30° and 54° N.

*Range.* Northeast Pacific. Pleistocene of California.

Subgenus *Diacria* Gray 1840

**Cavolina trispinosa** "Le Sueur" Blainville 1821, Dict. des Sci. Nat., vol. 22, p. 82.

*References.* Verrill, 1873, p. 669; Johnson, 1934, p. 151.

*Type Locality.* "La Mer des Antilles."

*Range.* Pelagic. N. 60° to S. 40°.

Genus *Styliola* Le Sueur 1826

**Styliola falcata** Gould 1852, Wilkes Exped., Moll., p. 490.

*Reference.* Oldroyd, 1927a, p. 20.

*Type Locality.* Northeastern Pacific.

*Range.* Northeastern Pacific, west of Oregon.

Genus *Creseis* Rang 1828

**Creseis acicula** Rang 1828, Ann. des Sci. Nat., vol. 13, p. 318.

*References.* Verrill, 1882b, p. 556; Johnson, 1934, p. 151.

*Type Locality.* "L'Océan et la Mer des Indes."

*Range.* Pelagic. N. 48°, S. 40°; Gulf of Mexico.

Genus *Clio* Linné 1767

***Clio cuspidata*** Bosc 1801, Suites à Deterville, ed. Buffon, Moll., II., p. 241.

*Reference.* Johnson, 1934, p. 151.

*Type Locality.* Not located.

*Range.* Pelagic. Atlantic Ocean, N. 60° to S. 42°.

***Clio exacuta*** Gould 1852, Wilkes Exped. Moll., p. 488.

*Reference.* Oldroyd, 1927a, p. 19.

*Type Locality.* Latitude 44° N., longitude 154° W., i.e. about 30° W. of the Columbia River.

*Range.* North Pacific Ocean, west of the Columbia River.

***Clio occidentalis*** Dall 1871, Amer. Jour. Conch., vol. 7, p. 140.

*Reference.* Oldroyd, 1927a, p. 20.

*Type Locality.* North Pacific, off the coast of California in latitude 33° N., longitude 130° W.

*Range.* Northeast Pacific between latitude 30° and 50° N.

***Clio pyramidata*** Linné 1767, Syst. Nat., ed. 12, vol. 1, p. 1094.

*References.* Verrill, 1882b, p. 555; Johnson, 1915, p. 158; 1934, p. 151.

*Type Locality.* "In Oceano."

*Range.* Pelagic. Davis Strait to S. 40°.

Section *Balantium* Benson 1837

***Clio polita*** "Craven" Pelseneer 1887, Challenger Repts., Pteropoda, Pt. II, Gymnosomata, p. 60.

*Reference.* Johnson, 1934, p. 152.

*Type Locality.* "Valorous" Exped., Davis Strait, 44° N., 31° W.

*Range.* Pelagic. Davis Strait to S. 8°.

## Family CYMBULIIDAE

Genus *Corolla* Dall 1871

***Corolla spectabilis*** Dall 1871, Amer. Jour. Conchol., vol. 7, p. 138.

*Reference.* Oldroyd, 1927a, p. 21.

*Type Locality.* North Pacific.

*Range.* North Pacific to Monterey, California, and Japan.

## Family PNEUMONODERMATIDAE

Genus *Pneumoderma* Cuvier 1804

***Pneumoderma violaceum*** d'Orbigny 1836, Voy. en Amér. Mérid. Moll., p. 129.

*Reference.* Johnson, 1934, p. 152.

*Type Locality.* Atlantic Ocean.

*Range.* Pelagic. N. 45° to S. 15°.

## Family CLIONIDAE

Genus *Clione* Pallas 1774

***Clione elegantissima*** Dall 1871, Amer. Jour. Conch., vol. 7, p. 139.

*Reference.* Oldroyd, 1927a, p. 22.

*Type Locality.* Pacific Ocean, latitude 51° 51' N., longitude 161° 26' W.

*Range.* South of the Aleutian Islands, in the latitude and longitude of the type locality.

***Clione kincaidi*** Agersborg, Ann. Sci. Nat. Zoöl., vol. 6, pp. 391-395.

*Reference.* Johnson and Snook, 1927, p. 482.

*Type Locality.* Friday Harbor, Puget Sound, Washington.

*Range.* Known only from the type locality.

***Clione limacina*** Phipps 1773, Voyage to the North Pole, p. 195.

*References.* Verrill, 1873, p. 668; Whiteaves, 1901a, p. 209; Johnson, 1915, p. 160; Oldroyd, 1927a, p. 21; Johnson, 1934, p. 152; Kerswill, 1940, pp. 23-31.

*Type Locality.* "Arctic Seas."

*Range.* North Bering Sea, Pribilof Islands. Circumboreal. Ellesmere Island to N. 37°.

## Family EURYBIIDAE

Genus *Halopsyche* Brown 1862

***Halopsyche globulosa*** Rang 1825, Ann. des Sci. Nat., vol. 5, p. 284.

*Reference.* Johnson, 1934, p. 153.

*Type Locality.* "Rocher de l'entrée du Barochais, port de l'île Saint-Pierre à Terre-neuve."

*Range.* Newfoundland and Nova Scotia.

## Order Sacoglossa

## Family STILIGERIDAE

Genus *Alderia* Allman 1846

***Alderia harvardiensis*** Gould 1870, Invert. Mass., p. 254.

*References.* Whiteaves, 1901a, p. 204; Johnson, 1915; p. 161; 1934, p. 153.

*Type Locality.* Cambridge, Massachusetts.

*Range.* Grand Manan Island. Cambridge and Cohasset, Massachusetts.

## Family HERMAEIDAE

Genus *Hermaea* Lovén 1844

***Hermaea vancouverensis*** O'Donoghue 1924, Trans. Roy. Can. Inst., vol. 15, p. 17.

*Reference.* O'Donoghue, 1926, p. 236.

*Type Locality.* Vancouver Island region, British Columbia, low tide.

*Range.* Known only from the type locality.

## Order Acoelea

## Family AEOLIDIDAE

Genus *Aeolidia* Cuvier 1798

***Aeolidia papillosa*** Linné 1761, Fauna Suecica, ed. 2, p. 508.

*References.* Whiteaves, 1901a, p. 204; Johnson, 1915, p. 162; O'Donoghue, 1926, p. 232; Johnson, 1934, p. 154.

*Type Locality.* "In Mari Norvegico."

*Range.* Greenland; Bay of Fundy to Watch Hill, Rhode Island, 13 to 208 fms. Alaska to California.

Genus *Hermisenda* Bergh 1878

***Hermisenda crassicornis*** Eschscholtz 1831, Zoöl. Atlas, Heft 4, p. 15.

*Reference.* O'Donoghue, 1926, p. 233.

*Type Locality.* Northwest coast of America, Sitka Island.

*Range.* Alaska to California.

Genus *Cuthona* Alder and Hancock 1855

***Cuthona concinna*** Alder and Hancock 1843, Ann. Mag. Nat. Hist., vol. 12, p. 234.

*Reference.* O'Donoghue, 1926, p. 231.

*Type Locality.* Whitley, Northumberland, Great Britain.

*Range.* Vancouver Island region, British Columbia, low tide; California. Northern Europe.

***Cuthona nana*** Alder and Hancock 1842, Ann. Mag. Nat. Hist., vol. 9, p. 36.

*Reference.* O'Donoghue, 1926, p. 231.

*Type Locality.* Cullercoats and Whitley, Great Britain.

*Range.* St. Lawrence Bay, Bering Sea. Northern Europe. Possible for Arctic Canada.

***Cuthona pustulata*** Alder and Hancock 1854, Ann. Mag. Nat. Hist., ser. 2, vol. 14, p. 104.

*References.* Whiteaves, 1901a, p. 205; Johnson, 1934, p. 154.

*Type Locality.* Cullercoats, Great Britain.

*Range.* Grand Manan, Duck Island, under stones at low water (Stimpson). Northern Europe.

*Synonym.* *Eolis purpurea* Stimpson 1854.



Genus *Cratena* Bergh 1864

***Cratena columbiana*** O'Donoghue 1922, Trans. Roy. Can. Inst., vol. 14, 1922, p. 160.

*Reference.* O'Donoghue, 1926, p. 231.

*Type Locality.* Gabriola Pass, British Columbia.

*Range.* Vancouver Island region, British Columbia, 7 to 12 fms.

***Cratena veronicae*** Verrill 1880, Proc. U. S. Nat. Mus., vol. 3, p. 389.

*References.* Verrill, 1882b, p. 553; Johnson, 1915, p. 163; 1934, p. 154; Russell, Henry D., 1937, p. 142.

*Type Locality.* Off Cape Cod.

*Range.* South Harpswell, Maine, to Cohasset, Massachusetts. Off Cape Cod, 23 to 31 fms. among hydroids. Possible for New Brunswick and Nova Scotia waters.

Genus *Tergipes* Cuvier 1805

***Tergipes despectus*** Johnston 1835, Loudon's Mag. Nat. Hist., vol. 8, p. 378.

*References.* Johnson, 1915, p. 164; 1934, p. 155.

*Type Locality.* Berwick Bay, England.

*Range.* Eastport, Maine, to Cold Spring Harbour, New York, on hydroids, 1 to 8 fms. Northern Europe.

## Family FLABELLINIDAE

Genus *Flabellina* Voigt 1834

***Flabellina iodinea*** Cooper 1862, Proc. Calif. Acad. Nat. Sci., vol. 2, p. 205.

*Reference.* O'Donoghue, 1926, p. 230.

*Type Locality.* San Diego Bay, California.

*Range.* Puget Sound to California.

Genus *Coryphella* Gray 1850

***Coryphella diversa*** Couthouy 1839, Boston Jour. Nat. Hist., vol. 2, p. 187.

*References.* Whiteaves, 1901a, p. 205; Johnson, 1915, p. 167; 1934, p. 155.

*Type Locality.* Massachusetts Bay, Chelsea Beach.

*Range.* Grand Manan to Massachusetts Bay.

***Coryphella fusca*** O'Donoghue 1921, Trans. Roy. Can. Inst., vol. 13, p. 195.

*Reference.* O'Donoghue, 1926, p. 229.

*Type Locality.* Vancouver Island region, British Columbia.

*Range.* Vancouver Island region, British Columbia.

**Coryphella longicaudata** O'Donoghue 1922, Trans. Roy. Can. Inst., vol. 14, p. 156.

*Reference.* O'Donoghue, 1926, p. 229.

*Type Locality.* None designated.

*Range.* Vancouver Island region, British Columbia.

**Coryphella rufibranchialis mananensis** Stimpson 1854, Invert. Grand Manan, p. 26.

*References.* Verrill, 1882b, p. 552; Whiteaves, 1901a, p. 205; Johnson, 1915, p. 166; 1934, p. 155.

*Type Locality.* Grand Manan Island, Hake Bay.

*Range.* Halifax, Nova Scotia, to off Block Island, Rhode Island, and Fishers Island, New York, 20 to 90 fms.

**Coryphella rutila** Verrill 1879, Amer. Jour. Sci., vol. 17, p. 314.

*References.* Verrill, 1882b, p. 552; Johnson, 1934, p. 155.

*Type Locality.* Eastport, Maine, low water.

*Range.* Known only from the type locality.

**Coryphella salmonacea** Couthouy 1838, Boston Jour. Nat. Hist., vol. 2, p. 68.

*References.* Johnson, 1915, p. 166; 1934, p. 155.

*Type Locality.* Charles River, Massachusetts.

*Range.* Greenland. Mouth of the Charles River, Boston, Massachusetts.

*Synonym.* *Aeolis papilligera* Beck 1847.

**Coryphella stellata** Stimpson 1854, Invert. Grand Manan, p. 25.

*References.* Whiteaves, 1901a, p. 205; Johnson, 1915, p. 166; 1934, p. 155.

*Type Locality.* Grand Manan.

*Range.* Grand Manan.

**Coryphella stimpsoni** Verrill 1880, Amer. Jour. Sci., vol. 17, p. 314.

*References.* Verrill, 1882b, p. 552; Whiteaves, 1901a, p. 205; Johnson, 1915, p. 167; 1934, p. 155.

*Type Locality.* Eastport, Maine.

*Range.* Halifax, Nova Scotia, to Massachusetts Bay, 1 to 51 fms.

**Coryphella subrosacea** Eschscholtz 1831, Zoöl. Atlas, 4 Heft, p. 15.

*Reference.* O'Donoghue, 1926, p. 229.

*Type Locality.* Northwest Coast of America, Sitka Island.

*Range.* Sitka, Alaska. Possible for Arctic Canada.

**Coryphella trilineata** O'Donoghue 1921, Trans. Roy. Can. Inst., vol. 13, p. 197.

*Reference.* O'Donoghue, 1926, p. 229.

*Type Locality.* Nanoose Bay, British Columbia.

*Range.* Vancouver Island region, British Columbia.

Genus *Eubbranchus* Forbes 1838

**Eubbranchus olivaceus** O'Donoghue 1922, Trans. Roy. Can. Inst., vol. 14, p. 158.

*Reference.* O'Donoghue, 1926, p. 230.

*Type Locality.* Jesse and Brandon islands, British Columbia.

*Range.* Vancouver Island region, British Columbia, on *Zostera marina*.

Genus *Himatella* Bergh 1892

**Himatella trophina** Bergh 1894, Bull. Mus. Comp. Zoöl., Harvard, vol. 25, p. 134.

*Reference.* O'Donoghue, 1926, p. 228.

*Type Locality.* Pacific Ocean.

*Range.* Port Althorp, Alaska. Possible for Arctic Canada.

## Family IDULIIDAE

Genus *Idulia* Leach 1852

**Idulia columbiana** O'Donoghue 1921, Trans. Roy. Can. Inst., vol. 13, p. 204.

*Reference.* O'Donoghue, 1926, p. 235.

*Type Locality.* Departure Bay and Nanoose Bay, British Columbia.

*Range.* Vancouver Island region, British Columbia.

**Idulia coronata** Gmelin 1790, Systema Naturae, ed. 13, vol. 1, p. 3105.

*References.* Whiteaves, 1901a, p. 204; Johnson, 1915, p. 169; 1934, p. 155.

*Type Locality.* "Ad litus insulae Walcheren Seelandiae".

*Range.* Labrador to New Jersey.

**Idulia formosa** Verrill 1875, Amer. Jour. Sci., 3rd ser., vol. 10, p. 41.

*References.* Whiteaves, 1901a, p. 204; Johnson, 1915, p. 169; 1934, p. 155.

*Type Locality.* Off Point Judith, Rhode Island, 10 to 14 fms.

*Range.* Nova Scotia to off Point Judith, Rhode Island, 10 to 50 fms.

## Family FIONIDAE

Genus *Fiona* Forbes and Hanley 1851

**Fiona pinnata** Eschscholtz 1831, Zool. Atlas, Heft 4, p. 14.

*References.* Verrill, 1882b, p. 551; Johnson, 1915, p. 168; O'Donoghue, 1926, p. 234; Johnson, 1934, p. 155.

*Type Locality.* Northwest Coast of America, Sitka Island.

*Range.* South of Newfoundland (Bergh), south of Martha's Vineyard, Massachusetts (Verrill). Alaska to California. Pelagic.

*Synonyms.* *F. marina* auctt., *F. nobilis* Alder and Hancock, *F. atlantica* Bergh.

## Family SCYLLAEIDAE

Genus *Scyllaea* Linné 1758**Scyllaea pelagica** Linné 1758, Syst. Nat., ed. 10, vol. 1, p. 656.*Reference.* O'Donoghue, 1926, p. 225.*Type Locality.* "Habitat in Pelagi, Fuco natante".*Range.* "Pacific Coast of North America."

## Family ZEPHYRINIDAE

Genus *Janolus* Bergh 1884**Janolus fuscus** O'Donoghue 1924, Trans. Roy. Can. Inst., vol. 15, p. 16.*Reference.* O'Donoghue, 1926, p. 228.*Type Locality.* West side of Galiano Island, British Columbia.*Range.* Vancouver Island region, British Columbia.

## Family PHYLLIROIDAE

Genus *Phylliroë* Péron and LeSueur 1810**Phylliroë lichtensteinii** Eschscholtz 1831, Zoöl. Atlas, vol. 4, pp. 17-18.*Reference.* O'Donoghue, 1926, p. 228.*Type Locality.* South Seas, west of the Hawaiian Islands.*Range.* Bering Sea.

## Family FIMBRIIDAE

Genus *Melibe* Rang 1829**Melibe leonina** Gould 1853, U. S. Explor. Exped., vol. 12, p. 310.*Reference.* O'Donoghue, 1926, p. 226.*Type Locality.* Port Discovery, Puget Sound.*Range.* Alaska to California.

## Family DENDRONOTIDAE

Genus *Dendronotus* Alder and Hancock 1845**Dendronotus dalli** Bergh 1879, Proc. Acad. Nat. Sci. Phila., 1879, p. 94.*Reference.* O'Donoghue, 1926, p. 223.*Type Locality.* Bering Straits.*Range.* Bering Sea; Aleutians; Vancouver Island region, British Columbia.**Dendronotus frondosus** Ascanius 1774, K. Norsk. Vidensk. Selsk. Skrift. vol. 5, p. 158.*References.* Whiteaves, 1901a, p. 206; Johnson, 1915, p. 169; O'Donoghue, 1926, p. 223; Johnson, 1934, p. 156.*Type Locality.* Not located.*Range.* Labrador to Watch Hill, Rhode Island, 4 to 60 fms. Bering Sea; Vancouver Island region, British Columbia.*Synonyms.* *Tritonia reynoldsii* Couthouy; *D. arborescens* Gould.

**Dendronotus giganteus** O'Donoghue 1921, Trans. Roy. Can. Inst., vol. 13, p. 187.

*Reference.* O'Donoghue, 1926, p. 223.

*Type Locality.* None given.

*Range.* Vancouver Island region, British Columbia, 10 to 25 fms.; Puget Sound.

**Dendronotus purpureus** Bergh 1879, Proc. Acad. Nat. Sci. Phila., 1879, p. 89.

*Reference.* O'Donoghue, 1926, p. 224.

*Type Locality.* Port Möller, Alaska.

*Range.* Bering Sea; Alaska peninsula.

**Dendronotus robustus** Verrill 1870, Amer. Jour. Sci., 2nd ser., vol. 50, p. 405.

*References.* Whiteaves, 1901a, p. 206; Johnson, 1915, p. 170; 1934, p. 156.

*Type Locality.* Whale Cove, Grand Manan, Nova Scotia.

*Range.* Nova Scotia to south of Martha's Vineyard, Massachusetts, 19 to 192 fms.

**Dendronotus rufus** O'Donoghue 1921, Trans. Roy. Can. Inst., vol. 13, p. 190.

*Reference.* O'Donoghue, 1926, p. 224.

*Type Locality.* None given.

*Range.* Vancouver Island region, British Columbia.

#### Family OKENIIDAE

##### Genus *Okenia* Menke 1830

**Okenia vancouverensis** O'Donoghue 1921, Trans. Roy. Can. Inst., vol. 13, p. 177.

*Reference.* O'Donoghue, 1926, p. 222.

*Type Locality.* Rosespit, north end of Queen Charlotte Islands.

*Range.* Queen Charlotte Islands and Vancouver Island region, British Columbia, 10 to 15 fms.

##### Genus *Ancula* Lovén 1846

**Ancula cristata sulphurea** Stimpson 1854, Smiths. Contr. to Knowl., vol. 6, art. 5, p. 26.

*References.* Whiteaves, 1901a, p. 207; Johnson, 1915, p. 176; 1934, p. 156.

*Type Locality.* Grand Manan.

*Range.* Grand Manan to Massachusetts.

## Family ONCHIDORIDIDAE

Genus *Onchidorus* Blainville 1816

***Onchidorus aspersa*** Alder and Hancock 1842, Ann. Mag. Nat. Hist., vol. 9, p. 32.

*References.* Verrill, 1873, p. 665; Whiteaves, 1901a, p. 207; Johnson, 1915, p. 174; 1934, p. 157.

*Type Locality.* Tynemouth, Cullercoats and Whitley, England.

*Range.* Eastport, Maine, to Newport, Rhode Island, 1 to 30 fms. Northern Europe.

*Synonym.* *O. pallida* Verrill 1870.

***Onchidorus diaphana*** Alder and Hancock 1845, Ann. Mag. Nat. Hist., vol. 16, p. 313.

*References.* Verrill, 1882b, p. 550; Johnson, 1915, p. 174; 1934, p. 157.

*Type Locality.* Meadfoot Sands, Torbay, England.

*Range.* Eastport, Maine, at low-water mark (Verrill). Northern Europe.

***Onchidorus fusca*** O. F. Müller 1776, Zoöl. Danicae Prodr., p. 229.

*References.* Renouf, 1916, pp. 12-15; O'Donoghue, 1926, p. 220; Johnson, 1934, p. 156.

*Type Locality.* Denmark.

*Range.* Bering Sea and Alaska to Puget Sound. Northern Europe.

*Synonym.* *Doris bilamellatus* Linné 1767, *non* 1761.

***Onchidorus? grisea*** Gould 1870, Invert. Mass., 2nd ed., p. 232.

*References.* Johnson, 1915, p. 175; 1934, p. 157.

*Type Locality.* "Charles River . . . Chelsea Beach . . . East Boston Point, Massachusetts."

*Range.* Near Eastport, Maine; Boston Harbour, Massachusetts.

***Onchidorus hystericina*** Bergh 1878, Malac. Untersuch., 14, Semper Reisen Archipel. Philipp., p. 614.

*Reference.* O'Donoghue, 1926, p. 221.

*Type Locality.* Kyska Island, Aleutians.

*Range.* Known only from the type locality.

***Onchidorus muricata*** Müller 1776, Zoöl. Danicae Prodr., p. 229.

*References.* Verrill, 1882b, p. 550; Whiteaves, 1901a, p. 207; Johnson, 1915, p. 173; 1934, p. 157.

*Type Locality.* Denmark.

*Range.* Halifax, Nova Scotia; Eastport, Maine; Block Island, Rhode Island; 3 to 21 fms. Northern Europe.

***Onchidorus? tenella*** Gould 1870, Invert. Mass., 2nd ed., p. 229.

*References.* Johnson, 1915, p. 175; 1934, p. 157.

*Type Locality.* Beverly, Massachusetts.

*Range.* Near Eastport, Maine; "Beverly, Feb. 1848" (Agassiz).

**Onchidorus varians** Bergh 1878, Malac. Untersuch. 14, Semper Reisen Archipel. Philipp., p. 613.

*Reference.* O'Donoghue, 1926, p. 221.

*Type Locality.* Kyska Island, Aleutians.

*Range.* Known only from the type locality.

Genus *Adalaria* Bergh 1878

**Adalaria albopapillosa** Dall 1872, Amer. Jour. Conch., vol. 7, p. 137.

*Reference.* O'Donoghue, 1926, p. 219.

*Type Locality.* Sitka, Alaska.

*Range.* Known only from the type locality.

*Remarks.* Possible for northern British Columbia.

**Adalaria pacifica** Bergh 1880, Proc. Acad. Nat. Sci. Phila., 1880, p. 78.

*Reference.* O'Donoghue, 1926, p. 220.

*Type Locality.* Unalaska, Alaska.

*Range.* Known only from the type locality.

**Adalaria proxima** Alder and Hancock 1854, Monogr. Brit. Nudibr. Moll., pt. 6, fam. 1, pl. 9, figs. 10-16.

*References.* Johnson, 1915, p. 173; 1934, p. 157.

*Type Locality.* Birkenhead, England.

*Range.* Eastport, Maine (Verrill). Northern Europe.

**Adalaria tschuktschica** Krause 1885, Archiv f. Naturg. Jahrg. 51, p. 296.

*Reference.* O'Donoghue, 1926, p. 220.

*Type Locality.* Metschigme Bay, Bering Sea.

*Range.* Known only from the type locality.

**Adalaria virescens** Bergh 1880, Proc. Acad. Nat. Sci. Phila., 1880, p. 81.

*Reference.* O'Donoghue, 1926, p. 220.

*Type Locality.* Unalaska, Alaska.

*Range.* Known only from the type locality.

Genus *Akiodoris* Bergh 1880

**Akiodoris lutescens** Bergh 1880, Proc. Acad. Nat. Sci. Phila., 1880, p. 53.

*Reference.* O'Donoghue, 1926, p. 220.

*Type Locality.* Nazan Bay, Alaska.

*Range.* Aleutian Islands.



Genus *Acanthodoris* Gray 1850

***Acanthodoris armata*** O'Donoghue 1927, Trans. Roy. Can. Inst., vol. 16, p. 4.

*Type Locality.* False Narrows Reef, British Columbia.

*Range.* Known only from the type locality.

***Acanthodoris atrogriseata*** O'Donoghue 1927, Trans. Roy. Can. Inst., vol. 16, p. 2.

*Type Locality.* False Narrows, British Columbia.

*Range.* Type locality, on the reef, low tide.

***Acanthodoris brunnea*** MacFarland 1905, Proc. Biol. Soc. Wash., vol. 18, p. 52.

*Reference.* O'Donoghue, 1926, p. 218.

*Type Locality.* Monterey Bay, California.

*Range.* Vancouver Island region, British Columbia, to California.

***Acanthodoris coerulescens*** Bergh 1880, Proc. Acad. Nat. Sci. Phila., 1880, p. 103.

*Reference.* O'Donoghue, 1926, p. 218.

*Type Locality.* Nunivak Island, Bering Sea.

*Range.* North end of Nunivak Island, 8 fms., Bering Sea.

***Acanthodoris hudsoni*** MacFarland 1905, Proc. Biol. Soc. Wash., vol. 18, p. 51.

*Reference.* O'Donoghue, 1926, p. 218.

*Type Locality.* Point Pinos, California.

*Range.* Vancouver Island region, British Columbia, to California.

***Acanthodoris nanaimoensis*** O'Donoghue 1921, Trans. Roy. Can. Inst., vol. 13, p. 172.

*Reference.* O'Donoghue, 1926, p. 218.

*Type Locality.* Jesse Island and lagoon near Hammond's Bay, British Columbia.

*Range.* Vancouver Island region, British Columbia.

***Acanthodoris pilosa pilosa*** Abildgaard 1789, Zoöl. Danica, ed. 3, vol. 3, p. 7.

*References.* Johnson, 1915, p. 173; O'Donoghue, 1926, p. 218; Johnson, 1934, p. 157.

*Type Locality.* "In fucis Maris Norvagici."

*Range.* Alaska to Vancouver Island region, British Columbia; Eastport, Maine, to New Haven, Connecticut. Norway.

***Acanthodoris pilosa albescens*** Bergh 1880, Proc. Acad. Nat. Sci. Phila., 1880, p. 97.

*Reference.* O'Donoghue, 1926, p. 219.

*Type Locality.* Aleutian Islands.

*Range.* Aleutians to Vancouver Island region, British Columbia.

**Acanthodoris pilosa ornata** Verrill 1879, Amer. Jour. Sci. (3) vol. 17, p. 313.

*References.* Johnson, 1915, p. 173; 1934, p. 157.

*Type Locality.* Eastport, Maine.

*Range.* Known only from the type locality, at low-water mark.

**Acanthodoris pilosa purpurea** Bergh 1880, Proc. Acad. Nat. Sci. Phila., 1880, p. 98.

*Reference.* O'Donoghue, 1926, p. 219.

*Type Locality.* Unalaska, Aleutian Islands.

*Range.* Unalaska, Aleutian Islands, to Vancouver Island region, British Columbia.

Family EUPHURIDAE

Genus *Palio* Gray 1857

**Palio lessonii** d'Orbigny 1837, Magasin de Zoölogie, vol. 7, art. 8, cl. 5, p. 5.

*References.* Whiteaves, 1901a, p. 206; Johnson, 1915, p. 172; 1934, p. 157.

*Type Locality.* La Rochelle, France.

*Range.* Labrador to Long Island Sound, 3 to 20 fms. Northern Europe.

*Synonym.* *Doris illuminata* Gould 1841.

**Palio pallida** Bergh 1880, Proc. Acad. Nat. Sci. Phila., 1880, p. 108.

*Reference.* O'Donoghue, 1926, p. 217.

*Type Locality.* Kyska Harbour, Aleutians, 10 fms.

*Range.* Known only from the type locality.

Genus *Issena* Iredale and O'Donoghue 1923

**Issena lacera** Abildgaard 1806, Zoöl. Danica, vol. 4, p. 23.

*References.* Verrill, 1882b, p. 547; Posselt, 1898, p. 251; Whiteaves, 1901a, p. 206; Johnson, 1915, p. 171; O'Donoghue, 1926, p. 216; Johnson, 1934, p. 157.

*Type Locality.* "In Mari Norvegico."

*Range.* Off Halifax, Nova Scotia, 90 to 92 fms. Gulf of Maine, 25 to 80 fms. Off Cape Cod, 70 fms. Northern Europe.

**Issena pacifica** Iredale and O'Donoghue 1923, Proc. Malac. Soc., vol. 15, p. 225.

*Reference.* O'Donoghue, 1926, p. 216.

*Type Locality.* Unimak Island, Alaska, 43 fms.

*Range.* Known only from the type locality.

Genus *Laila* MacFarland 1905

**Laila cockerelli** MacFarland 1905, Proc. Biol. Soc. Wash., vol. 18, p. 47.

*Reference.* O'Donoghue, 1926, p. 216.

*Type Locality.* Monterey Bay, California.

*Range.* Vancouver Island region, British Columbia, to California.

Genus *Polycera* Cuvier 1816

**Polycera zosterae** O'Donoghue 1924, Trans. Roy. Can. Inst., vol. 15, p. 7.

*Reference.* O'Donoghue, 1926, p. 217.

*Type Locality.* Not specified.

*Range.* Vancouver Island region, British Columbia, low tide.

Genus *Triopha* Bergh 1880

**Triopha aurantiaca** Cockerell 1908, Nautilus, vol. 21, p. 107.

*Reference.* O'Donoghue, 1926, p. 214.

*Type Locality.* San Pedro, California.

*Range.* Vancouver Island region, British Columbia; California.

**Triopha modesta** Bergh 1880, Proc. Acad. Nat. Sci. Phila., 1880, p. 113.

*Reference.* O'Donoghue, 1926, p. 215.

*Type Locality.* "Oc. Pacif. septentr."

*Range.* Yukon Harbour; Shumagin Island; Unimak, Alaska, 43 fms.

## Family DORIDIGITATIDAE

Genus *Doridigitata* d'Orbigny 1839

**Doridigitata maculata** O'Donoghue 1926, Trans. Roy. Can. Inst., vol. 14, p. 149.

*Reference.* O'Donoghue, 1926, p. 209.

*Type Locality.* Not specified.

*Range.* Vancouver Island region, British Columbia.

*Synonym.* *Doris echinata* O'Donoghue 1924.

Genus *Rostanga* Bergh 1879

**Rostanga pulchra** MacFarland 1905, Proc. Biol. Soc. Wash., vol. 18, p. 40.

*Reference.* O'Donoghue, 1926, p. 208.

*Type Locality.* Monterey Bay, California.

*Range.* Vancouver Island, British Columbia, to California.

Genus *Diaulula* Bergh 1878

**Diaulula sandiegensis** Cooper 1862, Proc. Calif. Acad. Nat. Sci., vol. 2, p. 204.

*Reference.* O'Donoghue, 1926, p. 209.

*Type Locality.* San Diego Bay, California.

*Range.* Alaska to Patagonia.

Genus *Discodoris* Bergh 1877

**Discodoris fulva** O'Donoghue 1924, Trans. Roy. Can. Inst., vol. 15, p. 27.

*Reference.* O'Donoghue, 1926, p. 208.

*Type Locality.* Head of Departure Bay, British Columbia.

*Range.* Vancouver Island region, British Columbia.

**Discodoris heathi** MacFarland 1905, Proc. Biol. Soc. Wash., vol. 18, p. 39.

*Reference.* O'Donoghue, 1926, p. 207.

*Type Locality.* Monterey Bay, California.

*Range.* Vancouver Island, British Columbia, to California.

Genus *Anisodoris* Bergh 1898

**Anisodoris nobilis** MacFarland 1905, Proc. Biol. Soc. Wash., vol. 18, p. 38.

*Reference.* O'Donoghue, 1926, p. 207.

*Type Locality.* Monterey Bay, California.

*Range.* Vancouver Island region, British Columbia, to California.

Genus *Archidoris* Bergh 1878

**Archidoris montereyensis** Cooper 1862, Proc. Calif. Acad. Sci., vol. 2, p. 204.

*Reference.* O'Donoghue, 1926, p. 206.

*Type Locality.* Monterey Bay, California.

*Range.* Alaska to California.

Genus *Cadlina* Bergh 1879

**Cadlina flavomaculata** MacFarland 1905, Proc. Biol. Soc. Wash., vol. 18, p. 43.

*Reference.* O'Donoghue, 1926, p. 210.

*Type Locality.* Monterey Bay, California.

*Range.* Vancouver Island region, British Columbia, to California.

**Cadlina laevis** Linné 1767, Syst. Nat., Ed. 12, p. 1083.

*References.* Whiteaves, 1901a, p. 207; Johnson, 1915, p. 171; 1934, p. 158.

*Type Locality.* "Habitat in Oceano Norvegica."

*Range.* Grand Manan to Massachusetts, 3 to 150 fms.

**Cadlina marginata** MacFarland 1905, Proc. Biol. Soc. Wash., vol. 18, p. 43.

*Reference.* O'Donoghue, 1926, p. 210.

*Type Locality.* Monterey Bay, California.

*Range.* Vancouver Island region, British Columbia, to California.

**Cadlina pacifica** Bergh 1879, Proc. Acad. Nat. Sci. Phila., vol. 1, p. 120.

*Reference.* O'Donoghue, 1926, p. 210.

*Type Locality.* None given.

*Range.* Unalaska; Shumagin Islands.

#### Family DIRONIDAE

Genus *Dirona* Cockerell and Eliot 1905

**Dirona albolineata** MacFarland 1912, Zoöl. Jahrb., Suppl., vol. 15, p. 516.

*Reference.* O'Donoghue, 1926, p. 209.

*Type Locality.* Monterey Bay, California.

*Range.* Vancouver Island region, British Columbia, to California.

#### Family ARMINIDAE

Genus *Armina* Rafinesque 1814

**Armina californica** Cooper 1862, Proc. Calif. Acad. Nat. Sci., 1862, p. 203.

*Reference.* O'Donoghue, 1926, p. 222.

*Type Locality.* San Diego Bay.

*Range.* Vancouver Island region, British Columbia, to California.

**Armina columbiana** O'Donoghue 1924, Trans. Roy. Can. Inst., vol. 15, p. 11.

*Reference.* O'Donoghue, 1926, p. 222.

*Type Locality.* West side of Black Rock in Porlier Pass (Cowichan Gap), Vancouver Island, British Columbia.

*Range.* Vancouver Island, British Columbia.

**Armina vancouverensis** Bergh 1876, Malak. Blätt., Bd. 23, p. 1.

*Reference.* O'Donoghue, 1926, p. 222.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

#### Family GLOSSODORIDIDAE

Genus *Glossodoris* Ehrenberg 1831

**Glossodoris dalli** Bergh 1879, Proc. Acad. Nat. Sci. Phila., 1879, p. 109.

*Reference.* O'Donoghue, 1926, p. 211.

*Type Locality.* Puget Sound, Washington.

*Range.* Known only from the type locality.

## Family DUVAUCELIIDAE

Genus *Sphaerostoma* Macgillivray 1843

***Sphaerostoma diomedia*** Bergh 1894, Bull. Mus. Comp. Zoöl., Harvard, vol. 25, p. 146.

*Reference.* O'Donoghue, 1926, p. 204.

*Type Locality.* Shumagin Islands, Alaska.

*Range.* Shumagin Islands; Vancouver Island region, British Columbia.

***Sphaerostoma exsulans*** Bergh 1894, Bull. Mus. Comp. Zoöl., Harvard, vol. 25, p. 150.

*Reference.* O'Donoghue, 1926, p. 204.

*Type Locality.* Point Año Nuevo, California.

*Range.* Vancouver Island region, British Columbia; California.

***Sphaerostoma gigantea*** Bergh 1904, Malac. Untersuch., No. 6, Semper Reisen Archipel. Philipp., 6, p. 26.

*Reference.* O'Donoghue, 1926, p. 204.

*Type Locality.* Unalaska, Alaska.

*Range.* Unalaska and Port Townsend, Alaska, 54 fms.

***Sphaerostoma tetraquetra*** Pallas 1788, Nova Acta Petrop., vol. 2, p. 237.

*Reference.* O'Donoghue, 1926, p. 204.

*Type Locality.* ?

*Range.* Unalaska, Alaska, to Victoria, British Columbia.

***Sphaerostoma undulata*** O'Donoghue, 1924, Trans. Roy. Can. Inst., vol. 15, p. 3.

*Reference.* O'Donoghue, 1926, p. 205.

*Type Locality.* Gabriola Pass and Cowichan Gap, Vancouver Island, British Columbia.

*Range.* Vancouver Island region, British Columbia, low tide.

## Subclass PULMONATA

## Order Stylommatophora

## Family ONCHIDIIDAE

Genus *Arctonchis* Dall 1905

***Arctonchis borealis*** Dall 1871, Amer. Jour. Conch., vol. 7, p. 135.

*References.* Taylor, G. W., 1889, p. 93; 1895a, p. 60; Dall, 1905a, p. 112; Oldroyd, 1927a, p. 59.

*Type Locality.* Sitka, Alaska.

*Range.* Alaska to Northern California.

Genus *Onchidella* Gray 1850

***Onchidella carpenteri*** W. G. Binney 1860, Proc. Acad. Nat. Sci., Phila., p. 154.

*References.* Taylor, G. W., 1889, p. 94; 1895a, p. 60.

*Type Locality.* Straits of Juan de Fuca.

*Range.* Straits of Juan de Fuca to Gulf of California.

## Family ELLOBIIDAE

Genus *Alexia* Gray 1847

***Alexia myosotis*** Draparnaud 1801, Tabl. Moll. France, p. 53.

*References.* Whiteaves, 1901a, p. 208; Johnson, 1915, p. 178; 1934, p. 159.

*Type Locality.* "Côtes de la Méditerranée".

*Range.* Nova Scotia to the West Indies.

Genus *Melampus* Montfort 1810

***Melampus lineatus*** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 246.

*Reference.* Whiteaves, 1901a, p. 207; Johnson, 1934, p. 159.

*Type Locality.* Maryland and New Jersey.

*Range.* Prince Edward Island to the Gulf of Mexico.

*Synonym.* *M. bidentatus* Say non Montagu.

## Family SIPHONARIIDAE

Genus *Siphonaria* Sowerby 1824Subgenus *Liriola* Dall 1870

***Siphonaria thersites*** Carpenter 1864, Ann. Mag. Nat. Hist., 3rd ser., vol. 14, p. 425.

*References.* Dall, 1905a, p. 111; Oldroyd, 1927a, p. 57.

*Type Locality.* Neah Bay, Washington.

*Range.* Aleutian Islands to the Straits of Juan de Fuca.

## FRESHWATER SPECIES

## Subclass CTENOBRANCHIATA

## Family VALVATIDAE

Genus *Valvata* Müller 1774

***Valvata bicarinata bicarinata*** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, pp. 81, 83.

*Reference.* Baker, F. C., 1928, p. 18.

*Type Locality.* Schuylkill River, Pennsylvania.

*Range.* Pennsylvania west to Illinois, south to Alabama. Lake Michigan.



**Valvata bicarinata connectans** Walker 1906, Nautilus, vol. 20, p. 30.

*Type Locality.* Lake Michigan, New Buffalo, Michigan.

*Range.* Lakes Michigan and Ontario and probably all other Great Lakes.

**Valvata bicarinata normalis** Walker 1902, Nautilus, vol. 15, p. 125.

*Reference.* Baker, F. C., 1928, p. 20; Robertson and Blakeslee, 1948, p. 82.

*Type Locality.* Muscatine, Iowa; and Utica, Illinois.

*Range.* Iowa, Illinois, Wisconsin.

**Valvata lewisi lewisi** Currier 1868, List Moll. Mich., Kent Sci. Inst. Misc. Publ., No. 1, p. 9.

*References.* Dall, 1905a, p. 123; Baker, F. C., 1928, p. 26; Brooks and Brooks, 1940, p. 75; Robertson and Blakeslee, 1948, p. 83.

*Type Locality.* Little Lakes, New York.

*Range.* Mackenzie River south to northern United States and east to the Atlantic.

*Synonym.* *V. striata* Lewis non Philippi.

**Valvata lewisi helicoidea** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 123.

*Reference.* Baker, F. C., 1928, p. 29.

*Type Locality.* Not specified.

*Range.* With the type form, to some extent everywhere, but especially toward the Northwest. Yukon Territory; British Columbia.

**Valvata lewisi mccolli** La Rocque 1932, Can. Field-Nat., vol. 46, p. 199.

*Type Locality.* Shallow Lake, Grey County, Ontario, in Pleistocene (late Wisconsin) marl.

*Range.* Known only from the type locality.

**Valvata lewisi ontariensis** F. C. Baker 1931, Nautilus, vol. 44, p. 119.

*Reference.* La Rocque, 1934, p. 39.

*Type Locality.* Shakespeare Island Lake, Lake Nipigon, Ontario.

*Range.* Northwestern Ontario.

**Valvata mergella** Westerlund 1885, Vega Exped., vol. 4, p. 209.

*Reference.* Dall, 1905a, p. 124.

*Type Locality.* Port Clarence, Alaska.

*Range.* Alaska, Yukon.

**Valvata perdepressa perdepressa** Walker 1906, Nautilus, vol. 20, p. 30.

*References.* Baker, F. C., 1928, p. 21; Robertson and Blakeslee, 1948, p. 83.

*Type Locality.* Lake Michigan at Michigan City, Indiana.

*Range.* Wisconsin east to New York; Lakes Michigan, Erie, and Ontario. Little Lakes, New York.

**Valvata perdepessa walkeri** F. C. Baker 1930, Trans. Ill. Acad. Sci., vol. 22, p. 188.

*Reference.* La Rocque, 1933b, p. 96.

*Type Locality.* Lake Michigan, near Chicago, Illinois.

*Range.* Pleistocene and Recent, southern part of Lake Michigan. Lake Erie and probably all the Great Lakes.

**Valvata piscinalis** Müller 1774, Verm. Terr. et Fluv. Hist., vol. 2, p. 172.

*References.* Latchford, 1914, p. 10; Germain, 1931, p. 669; Robertson and Blakeslee, 1948, p. 83.

*Type Locality.* Europe.

*Range.* Europe. Introduced: Cornwall, Toronto, Port Weller, Port Dalhousie, and Niagara-on-the-Lake, Ontario; Lake Erie, Erie County; and Lake Ontario, Monroe County, New York.

**Valvata sincera sincera** Say 1824, Rept. Long's Exped., vol. 2, p. 264.

*References.* Dall, 1905a, p. 122; Baker, F. C., 1928, p. 23; Brooks and Brooks, 1940, p. 75; Robertson and Blakeslee, 1948, p. 83.

*Type Locality.* "Northwest Territory."

*Range.* Newfoundland, Quebec, and Maine west to Western Ontario and Manitoba, south to southern Michigan and northern New York.

**Valvata sincera danielsi** Walker 1906, Nautilus, vol. 20, p. 28.

*Reference.* Baker, F. C., 1928, p. 24.

*Type Locality.* Cannon Lake, Rice County, Minnesota.

*Range.* Minnesota, Recent; Illinois and Ontario, fossil.

**Valvata sincera nylanderi** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 122.

*References.* Baker, F. C., 1928, p. 25; 1939, p. 91.

*Type Locality.* Aroostook County, Maine.

*Range.* Maine, Ontario, Michigan, New York, Wisconsin.

**Valvata tricarinata tricarinata** Say 1817, Jour. Acad. Nat. Sci. Phila., vol. 1, p. 13.

*References.* Dall, 1905a, p. 121; Baker, F. C., 1928, p. 11; 1939, p. 91; Robertson and Blakeslee, 1948, p. 81.

*Type Locality.* Delaware River.

*Range.* New England and Virginia westward and northward to Great Slave Lake.

**Valvata tricarinata basalis** Vanatta 1915, Nautilus, vol. 28, p. 105.

*Reference.* Baker, F. C., 1928, p. 17.

*Type Locality.* Hudson River, New York.

*Range.* Probably same as the type form.

**Valvata tricarinata infracarinata** Vanatta 1915, Nautilus, vol. 28, p. 104.

*Reference.* Baker, F. C., 1928, p. 18.

*Type Locality.* White Pond, New Jersey.

*Range.* Ontario, New York, New Jersey, Michigan.

**Valvata tricarinata mediocarinata** F. C. Baker 1928, Freshwater Moll. Wis., p. 17.

*Type Locality.* Lower Asylum Bay, Lake Winnebago, Wisconsin.

*Range.* Probably same as type form.

**Valvata tricarinata perconfusa** Walker 1917, Nautilus, vol. 31, p. 36.

*References.* Walker, Bryant, 1902, p. 124 (original description of *V. t. confusa*); Baker, F. C., 1928, p. 16; Robertson and Blakeslee, 1948, p. 82.

*Type Locality.* Not specified.

*Range.* Same as for the type form.

*Synonym.* *Valvata tricarinata confusa* Walker.

**Valvata tricarinata simplex** Gould 1841; Invert. Mass., 1st ed., p. 226.

*References.* Dall, 1905a, p. 121; Baker, F. C., 1928, p. 18; Robertson and Blakeslee, 1948, p. 82.

*Type Locality.* Vermont.

*Range.* English River, Peace River, Great Slave Lake, Upper Mackenzie River, Lake Superior, Wisconsin.

**Valvata tricarinata unicarinata** De Kay 1843, Zoology of N.Y., pt. 5, p. 118.

*References.* Dall, 1905a, p. 121; Baker, F. C., 1928, p. 16.

*Type Locality.* Lake Champlain and Erie Canal.

*Range.* Same as for the type form.

**Valvata virens** Tryon 1863, Proc. Acad. Nat. Sci. Phila., 1863, p. 148.

*Reference.* Dall, 1905a, p. 124.

*Type Locality.* Clear Lake, California.

*Range.* California to Vancouver Island, British Columbia.

**Valvata winnebagoensis** F. C. Baker 1928, Freshwater Moll. Wis., p. 475.

*Reference.* None.

*Type Locality.* Miller Bay, Lake Winnebago, Wisconsin.

*Range.* Lake Winnebago, Wisconsin.

#### Family VIVIPARIDAE

Genus *Viviparus* Denys de Montfort 1810

**Viviparus contectoides** W. G. Binney 1865, Land and F. W. Shells N. Amer., pt. 3, p. 23.

*References.* Walker, B., 1918, p. 124; Baker, F. C., 1928, p. 35; Robertson and Blakeslee, 1948, p. 80.

*Type Locality.* Not specified.

*Range.* Eastern United States, from Michigan to New York, Ontario (Grand River), south to Florida and west to Arkansas, Illinois, and Wisconsin.

**Viviparus japonicus** von Martens 1860, Malakozoöl. Blätter, vol. 7, p. 44.

*Reference.* Walker, B., 1918, p. 126.

*Type Locality.* Japan.

*Range.* Japan. Introduced in California (Nautilus, vol. 25, p. 31, 1911); Chinese markets, Victoria, British Columbia (Nautilus, vol. 42, p. 142 and vol. 7, p. 144); Philadelphia, Pennsylvania (Nautilus, vol. 42, p. 142); Massachusetts (Walker).

*Remarks.* This is a synonym of *V. malleatus* Reeve, according to Richards and Adams, Nautilus, vol. 42, pp. 141-142.

**Viviparus malleatus** Reeve 1863, Conch. Iconica, *Paludina*, pl. 5, species 25.

*References.* Walker, B., 1918, p. 126; Schmeck, 1942, p. 102.

*Type Locality.* Japan.

*Range.* Asia. Introduced, Niagara River, shore of Cayuga Island, Niagara Falls, New York (Schmeck, 1942); Ottawa, Ontario, Patterson "Creek", an inlet of the Rideau Canal, not common, a local and possibly temporary, accidental introduction; Harrison Mills, about 10 miles west of Agassiz, British Columbia.

#### Genus *Campeloma* Rafinesque 1820

**Campeloma decisum** Say 1817, Nicholson's Encycl., 1st Amer. Ed., pl. 3, fig. 6.

*References.* Dall, 1905a, p. 125; Baker, F. C., 1928, p. 57; Robertson and Blakeslee, 1948, p. 81.

*Type Locality.* Not stated by Say. Delaware River (Binney).

*Range.* Eastern North America, Rio Grande to Nova Scotia.

**Campeloma integrum** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 174.

*Reference.* Baker, F. C., 1928, p. 63.

*Type Locality.* Waters of the Missouri.

*Range.* Mississippi River, from Minnesota to Iowa, west to Missouri and Nebraska.

**Campeloma leptum** Mattox 1940, Nautilus, vol. 54, p. 12.

*Type Locality.* Mill pond near Saint Thomas, Ontario.

*Range.* Known only from the type locality.

**Campeloma milesii** Lea 1863, Proc. Acad. Nat. Sci. Phila., 1863, p. 156.

*Reference.* Baker, F. C., 1928, p. 61.

*Type Locality.* Branch Lake, Antrim County, Michigan.

*Range.* Michigan, Wisconsin, Minnesota?, Southern Canada?.

**Campeloma rufum** Haldeman 1841, Mon. Limn., pt. 3, p. 3 of wrapper.

*Reference.* Baker, F. C., 1928, p. 68.

*Type Locality.* Ohio.

*Range.* New England west to Iowa, Michigan, and Wisconsin, south to Alabama. Interglacial; Toronto, Ontario.

**Campeloma tannum** Mattox 1940, Nautilus, vol. 54, p. 15.

*Type Locality.* Speed River, near Hespeler, Ontario.

*Range.* Known only from the type locality.

#### Family AMNICOLIDAE

Genus *Amnicola* Gould and Haldeman 1841

**Amnicola leightoni** F. C. Baker 1920, Nautilus, vol. 33, p. 125.

*References.* Baker, F. C., 1928, p. 120; Robertson and Blakeslee, 1948, p. 84.

*Type Locality.* Pleistocene near Rush Lake, Logan County, Ohio.

*Range.* Marl deposits in Wisconsin, Michigan, Illinois, Indiana, Ohio. Doubtfully, marl deposits in Ontario.

**Amnicola limosa limosa** Say 1817, Jour. Phila. Acad. Sci., vol. 1, p. 125.

*References.* Dall, 1905a, p. 117; Baker, F. C., 1928, p. 93; Brooks and Brooks, 1940, p. 75; Berry, E. G., 1943, p. 23; Robertson and Blakeslee, 1948, p. 84.

*Type Locality.* Delaware and Schuylkill rivers, Pennsylvania.

*Range.* Virginia to Wisconsin and Hudson Bay. Newfoundland.

**Amnicola limosa parva** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 34.

*Reference.* Baker, F. C., 1928, p. 102.

*Type Locality.* Springfield, Ohio.

*Range.* Atlantic and Middle States. Its range may be coincident with that of *A. limosa*.

**Amnicola limosa porata** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 174.

*Reference.* Baker, F. C., 1928, p. 98.

*Type Locality.* Lake Cayuga, New York.

*Range.* Apparently the same as for typical *A. limosa*. Berry (1943, p. 26) does not recognize the variety.

**Amnicola limosa superiorenensis** F. C. Baker 1928, Freshwater Moll. Wis., p. 101.

*Reference.* Baker, F. C., 1939, p. 91.

*Type Locality.* Bayfield, Bayfield County, Wisconsin, shore of Lake Superior.

*Range.* Lakes Superior, Michigan, and Ontario. Probably all the other Great Lakes. Lakes in Rainy River and Kenora districts, Ontario.

**Amnicola pallida** Haldeman 1842, Mon. Limn., pt. 3, cover, p. 3.

*References.* Haldeman, 1845, p. 12; Dall, 1905a, p. 117.

*Type Locality.* Lake Champlain.

*Range.* New York northward to Quebec and Manitoba.

**Amnicola walkeri** Pilsbry 1898, Nautilus, vol. 12, p. 43.

*References.* Mozley, 1934b, p. 375; Berry, E. G., 1943, p. 26; Robertson and Blakeslee, 1948, p. 84.

*Type Locality.* High Island Harbour, Beaver Islands, Lake Michigan.

*Range.* Upper St. Lawrence drainage from Ottawa, Ontario, to Lake Michigan. Mississippi River drainage; Manitoba.

*Synonym.* *Amnicola granum* auctt. non Say.

*Remarks.* The Canadian records of *Amnicola granum* (Say) and *Lyogyrus granum* (Say) summarized by Dall (1905a, p. 118) belong here. According to Berry (1943, p. 29) *L. granum* is confined to the Atlantic drainage in Pennsylvania and New Jersey, and all citations of this species west and north of that area refer to *A. walkeri* Pilsbry.

#### Subgenus *Marstonia* Baker 1926

**Amnicola lustrica lustrica** Pilsbry 1890, Nautilus, vol. 4, p. 53.

*References.* Baker, F. C., 1928, p. 104; Berry, E. G., 1943, p. 29; Robertson and Blakeslee, 1948, p. 84.

*Type Locality.* Not specifically given: "New York to Illinois and Minnesota" (Pilsbry).

*Range.* New York to Minnesota; southern Ontario.

**Amnicola lustrica decepta** F. C. Baker 1928, Freshwater Moll. Wis., p. 108.

*References.* Baker and Cahn, 1931, p. 49.

*Type Locality.* Silver Lake, Waukesha County, Wisconsin.

*Range.* Minnesota to Michigan.

**Amnicola lustrica perlustrica** F. C. Baker 1928, Freshwater Moll. Wis., p. 109.

*Type Locality.* Lake Michigan shore east of Sturgeon Bay, Door County, Wisconsin.

*Range.* Lakes Superior, Michigan, and Erie. Probably all the other Great Lakes.



**Amnicola winkleyi winkleyi** Pilsbry 1912, Nautilus, vol. 26, p. 1.

*References.* Winkley, 1914, p. 48; Baker, F. C., 1920, p. 125.

*Type Locality.* Saco, Maine.

*Range.* Maine; possible for New Brunswick.

**Amnicola winkleyi mozleyi** Walker 1925, Nautilus, vol. 39, p. 6.

*Reference.* Mozley, 1934, p. 377.

*Type Locality.* "A clay bank, Winnipeg, Manitoba."

*Range.* Fossil, Winnipeg, Manitoba; living, Lake Simcoe, Ontario, doubtfully identified by Rawson (1930).

#### Subgenus *Cincinnatia* Pilsbry 1891

**Amnicola integra** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 174.

*References.* Dall, 1905a, p. 118; Baker, F. C., 1928, p. 122; Berry, E. G., 1943, p. 32; Robertson and Blakeslee, 1948, p. 85.

*Type Locality.* Not definitely known. "Inhabits the waters of the Missouri." (Say).

*Range.* New York to Utah; Texas to Hudson Bay. Interglacial; Toronto, Ontario.

*Synonym.* *Amnicola cincinnatiensis* Anthony.

**Amnicola integra judayi** F. C. Baker 1922, Nautilus, vol. 36, p. 19.

*Reference.* Baker, F. C., 1928, p. 124.

*Type Locality.* Off Doemel Point, Lake Winnebago.

*Range.* Fox River drainage, Wisconsin.

#### Subgenus *Probythinella* Thiele 1928

(Synonym: *Vancleaveia* F. C. Baker)

**Amnicola binneyana** Hannibal 1913, Proc. Malac. Soc. London, vol. 10, p. 190.

*References.* Richards, 1932, p. 33; Berry, E. G., 1943, p. 36; Robertson and Blakeslee, 1948, p. 85.

*Type Locality.* Ohio (Say's *Paludina obtusa*).

*Range.* St. Joseph's Island, Lake Huron; the Great Lakes and their immediate vicinity.

**Amnicola emarginata emarginata** Küster 1852, Conch. Cab., ed. 2, Mon. *Paludina*, p. 50.

*References.* Dall, 1905a, p. 118; Baker, F. C., 1928, p. 126; Pilsbry, 1935, p. 562; Berry, E. G., 1943, p. 40.

*Type Locality.* "North America."

*Range.* Ohio northward to Moose River, Hudson Bay.



**Amnicola emarginata canadensis** F. C. Baker 1928, Freshwater Moll. Wis., p. 130.

*Reference.* Berry, E. G., 1943, p. 40.

*Type Locality.* Lake Kakiska, near mouth of Beaver River, west of Great Slave Lake, N.W.T., Canada.

*Range.* Mackenzie River drainage. Interglacial; Toronto, Ontario.

**Amnicola lacustris** F. C. Baker 1928, Freshwater Moll. Wis., p. 127.

*Reference.* Berry, E. G., 1943, p. 40.

*Type Locality.* Lake Winnebago, near Oshkosh, Wisconsin.

*Range.* "Doubtless occurs in many other places" (Baker).

*Remarks.* The species is not recognized by Berry (1943, p. 40) who places it under *Amnicola binneyana* (Hannibal) as a synonym.

#### Genus *Pyrgulopsis* Call and Pilsbry 1886

**Pyrgulopsis letsoni** Walker 1901, Nautilus, vol. 14, p. 113.

*References.* Baker, F. C., 1928, p. 140; Robertson, H. R., 1938a, p. 2; Berry, E. G., 1943, p. 41; Robertson and Blakeslee, 1948, p. 85.

*Type Locality.* Goat Island, Niagara River, New York; subfossil.

*Range.* Port Dover and Kingsville, Ontario; Ohio; Michigan; Pleistocene, New York and Chicago, Illinois.

#### Genus *Hydrobia* Hartmann 1821

**Hydrobia nickliniana** Lea 1839, Trans. Amer. Phil. Soc., vol. 6, p. 92.

*References.* Baker, F. C., 1928, p. 132; Berry, E. G., 1943, p. 44; Robertson and Blakeslee, 1948, p. 88.

*Type Locality.* Hot Springs, Virginia.

*Range.* Eastern United States from Pennsylvania to Wisconsin, Indiana, and Illinois; north to Ontario and south to Alabama.

#### Genus *Fluminicola* Stimpson 1865

**Fluminicola nuttalliana nuttalliana** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 101.

*References.* Dall, 1905a, p. 119; Henderson, 1929, p. 168.

*Type Locality.* Wahlamat River, near its junction with the Columbia River.

*Range.* California to British Columbia.

**Fluminicola nuttalliana hindsii** Baird 1863, Proc. Zool. Soc. London, 1863, p. 67.

*Reference.* Dall, 1905a, p. 119.

*Type Locality.* "Kootanie and stream at foot of Rocky Mountains, British Columbia" (Baird).

*Range.* Kootenai and Wigwam rivers, British Columbia.

**Fluminicola virens** Lea 1839, Trans. Amer. Phil. Soc., vol. 6, p. 91.

*References.* Dall, 1905a, p. 119; Henderson, 1929, p. 169.

*Type Locality.* Wahlamat River, near its junction with the Columbia River.

*Range.* Oregon, Washington, and Vancouver Island, British Columbia.

Genus *Hoyia* F. C. Baker 1926

**Hoyia sheldoni** Pilsbry 1890, Nautilus, vol. 4, p. 52.

*Reference.* Baker, F. C., 1928, p. 144.

*Type Locality.* Lake Michigan, off Racine, Wisconsin.

*Range.* Known only from the type locality but possible for the other Great Lakes.

Genus *Littoridina* Souleyet 1852

**Littoridina tenuipes** Couper in Haldeman 1845, Monogr. F. W. Univalve Moll., p. 23.

*Reference.* Pilsbry, 1939, p. 812.

*Type Locality.* Hopeton, Georgia.

*Range.* Florida, Bermuda; doubtfully, Michigan.

*Remarks.* Included here because of a record by Whiteaves (1863) for "St. Lawrence near Quebec" which was probably erroneous.

Genus *Somatogyrus* Gill 1863

**Somatogyrus subglobosus** Say 1825, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 125.

*References.* Baker, F. C., 1928, p. 155; Berry, E. G., 1943, p. 49; Robertson and Blakeslee, 1948, p. 88.

*Type Locality.* Northwestern Territory.

*Range.* Great Lakes region. Ottawa River at Duck Island, Ontario and Quebec; St. Lawrence River, Lake St. Peter, St. François du Lac, and Notre Dame de Pierreville (Coll. L. Philippe). Interglacial; Toronto.

*Remarks.* The subspecific name *S. subglobosus isogonus* Say has been applied to Lake Ontario and Niagara River specimens; it seems to differ but little from the type form.

Genus *Bulimus* Scopoli 1777

**Bulimus tentaculatus tentaculatus** Linné 1758, Syst. Nat., ed. 10, p. 774.

*References.* Germain, 1931, p. 604; Berry, E. G., 1943, p. 53; Robertson and Blakeslee, 1948, p. 89.

*Type Locality.* Europe.

*Range.* Europe. Introduced, Great Lakes region; Ontario, Quebec, New York, and District of Columbia, to Wisconsin. In Canada: Ottawa and St. Lawrence rivers; Rideau River and Canal; Great Lakes.

**Bulimus tentaculatus magnalacustris** F. C. Baker 1928, Fresh-water Moll. Wis., p. 81.

*Reference.* Berry, E. G., 1943, p. 53.

*Type Locality.* Winnebago Lake, near Oshkosh, Wisconsin.

*Range.* Great Lakes region from Albany, New York, west to Winnebago Lake, Wisconsin.

*Remarks.* It is not clear from Baker's writings whether the type form and the variety, or the variety only, occurs in North America. Some workers have expressed doubt as to the validity of the variety. Both the type form and Baker's variety are listed here until the matter is cleared up.

#### Family POMATIOPSIDAE

##### Genus *Pomatiopsis* Tryon 1862

**Pomatiopsis cincinnatiensis** Lea 1840, Proc. Amer. Phil. Soc., vol. 1, p. 289.

*References.* Baker, F. C., 1928, p. 168; Berry, E. G., 1943, p. 58.

*Type Locality.* Vicinity of Cincinnati, Ohio.

*Range.* Western New York west to Iowa and Minnesota; Michigan south to the Ohio River.

**Pomatiopsis lapidaria** Say 1817, Jour. Acad. Nat. Sci. Phila., vol. 1, p. 13.

*References.* Dall, 1905a, p. 120; Baker, F. C., 1928, p. 162; Berry E. G., 1943, p. 58; Robertson and Blakeslee, 1948, p. 89.

*Type Locality.* Not specified.

*Range.* Eastern North America from Georgia to Iowa. Hudson Bay record doubtful.

*Remarks.* The subspecific name *scalaris* F. C. Baker has been applied to the fossil form of the Niagara River gravels.

#### Family PLEUROCERIDAE

##### Genus *Pleurocera* Rafinesque 1818

**Pleurocera acutum** Rafinesque 1831, Enumer. and Account, p. 3.

*References.* Baker, F. C., 1928, p. 171; Robertson and Blakeslee, 1948, p. 90.

*Type Locality.* Lake Erie.

*Range.* Shores of Great Lakes, from Ontario to Superior. Interglacial; Toronto, Ontario.

**Pleurocera acutum tractum** Anthony 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 361.

*Reference.* Baker, F. C., 1928, p. 174.

*Type Locality.* Ohio.

*Range.* Western New York to Great Lakes region. Canada south to Ohio River drainage.

*Remarks.* A form of doubtful value listed here for completeness. It may eventually be placed in the synonymy of *P. acutum* Rafinesque.

Genus *Goniobasis* Lea 1862

(***Goniobasis columbiensis***) Whiteaves 1905, *Nautilus*, vol. 19, p. 61.

*Reference.* Goodrich, 1937, pp. 82-84.

*Type Locality.* "Headwaters of the Columbia River at Upper Columbia Falls, in the East Kootenay district of British Columbia."

*Range.* Recorded only from the type locality.

*Remarks.* Goodrich (1937) has proved conclusively that this is *G. livescens* and that Whiteaves' locality was erroneous.

***Goniobasis depygis*** Say 1829, *New Harmony Disseminator*, II, p. 291.

*Reference.* De Kay, 1843, p. 89; Walker, B., 1918, pp. 36, 157.

*Type Locality.* Falls of the Ohio.

*Range.* Ohio River. Interglacial; Toronto?

***Goniobasis haldemani*** Tryon 1865, *Amer. Jour. Conch.*, vol. 1, p. 38.

*References.* Letson, 1905, p. 17; Robertson and Blakeslee, 1948, p. 90.

*Type Locality.* Lakes Erie and Champlain.

*Range.* Goat Island, Niagara River, Pleistocene; Toronto, Ontario, interglacial. Lakes Erie and Champlain.

***Goniobasis livescens livescens*** Menke 1830, *Syn. Meth.*, p. 135.

*References.* Baker, F. C., 1928, p. 180; Robertson and Blakeslee, 1948, p. 91.

*Type Locality.* Lake Erie, New York.

*Range.* Great Lakes region south to Ohio River drainage; St. Lawrence and Ottawa rivers and their tributaries.

***Goniobasis livescens michiganensis*** F. C. Baker 1928, *Freshwater Moll. Wis.*, p. 183.

*Type Locality.* Lake Michigan, Sturgeon Bay, Wis.

*Range.* Great Lakes region south to Ohio River drainage; St. Lawrence and Ottawa rivers and their tributaries.

***Goniobasis livescens niagarensis*** Lea 1841, *Philos. Proc.*, vol. 2, p. 12.

*References.* Tryon, 1873, p. 248; Robertson and Blakeslee, 1948, p. 92.

*Type Locality.* Niagara Falls, New York.

*Range.* Niagara region, Ontario and New York.

***Goniobasis (plicifera* var.?) *silicula*** Gould 1847, *Proc. Boston Soc. Nat. Hist.*, vol. 2, p. 224.

*Reference.* Dall, 1905a, p. 116.

*Type Locality.* Nisqually, Oregon.

*Range.* California, Oregon, Washington. Doubtfully, Vancouver Island, British Columbia (Lord).

## Subclass PULMONATA

## Order Basommatophora

## Family LYMNAEIDAE

Genus *Lymnaea* Lamarck 1799

***Lymnaea stagnalis jugularis*** Say 1817, Nicholson's Encycl., vol. 1, art. Conchology.

*References.* Dall, 1905a, p. 65; Baker, F. C., 1911, p. 137; 1928, p. 198; Henderson, 1929, p. 122; Mozley, 1939, pp. 267-269; Robertson and Blakeslee, 1948, p. 51.

*Type Locality.* Lake Superior (*appressa*).

*Range.* Arctic Ocean south to Colorado and Illinois.

*Synonym.* *L. appressa* Say.

***Lymnaea stagnalis lillianae*** F. C. Baker 1910, Nautilus, vol. 23, p. 112.

*References.* Baker, F. C., 1911, p. 153; 1928, p. 205.

*Type Locality.* Tomahawk Lake, Oneida County, Wisconsin.

*Range.* Western New York to Minnesota, north to Manitoba, Ontario, and Quebec.

***Lymnaea stagnalis sanctaemariae*** Walker 1892, Nautilus, vol. 6, p. 31.

*References.* Baker, F. C., 1911, p. 156; 1928, p. 207.

*Type Locality.* Neebish Rapids, St. Mary's River, Michigan.

*Range.* Northern Michigan and Lake Superior region in Manitoba and Ontario.

*Synonym.* *L. higleyi* Baker 1905.

***Lymnaea stagnalis wasatchensis*** "Hemphill" Baker 1911, Lymnaeidae N. and M. America, p. 152.

*Reference.* Henderson, 1929, p. 123.

*Type Locality.* Near Salt Lake, Utah.

*Range.* Oregon, Washington, Utah, British Columbia, Alberta, Mackenzie district.

Genus *Radix* Montfort 1810

***Radix auricularia*** Linné 1758, Syst. Nat., ed. 10, p. 774.

*References.* Allen, 1911, p. 60; Baker, F. C., 1911, p. 179; Goodrich, 1932, p. 47; Eyerdam, 1941, p. 18.

*Type Locality.* Europe.

*Range.* Europe and northern Asia. Introduced: Illinois, New York, Washington, Michigan, Ohio, and other parts of the United States. Shores of Lake Huron and Lake Erie; Detroit River.

Genus *Stagnicola* (Leach) Jeffreys 1830

**Stagnicola adelinae** Tryon 1863, Proc. Acad. Nat. Sci. Phila., vol. 15, p. 148.

*References.* Dall, 1905a, p. 78; Henderson, 1929, p. 124.

*Type Locality.* San Francisco, California.

*Range.* California to British Columbia.

**Stagnicola alaskensis** F. C. Baker 1911, Lymnaeidae N. and M. America, p. 455.

*Type Locality.* Port Clarence, Alaska.

*Range.* Known only from the type locality.

*Synonym.* *Lymnaea scalaris* Westerlund *non* Brown *nec* Sowerby.

**Stagnicola alberta** F. C. Baker 1919, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 537.

*Reference.* Mozley, 1931, p. 158.

*Type Locality.* Brazeau Lake, Alberta.

*Range.* Known only from the type locality.

**Stagnicola anticostiana** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 79.

*Reference.* Baker, F. C., 1911, p. 106.

*Type Locality.* Marl Lake, Anticosti Island, Quebec.

*Range.* Known only from the type locality.

**Stagnicola apicina** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 103.

*References.* Baker, F. C., 1911, p. 443; Henderson, 1929, p. 124.

*Type Locality.* Willamette River near its junction with the Columbia River, Oregon.

*Range.* Northern part of the lower peninsula of Michigan west to western Washington; Ontario south to southern Wyoming and South Dakota.

**Stagnicola arctica** Lea 1864, Proc. Acad. Nat. Sci. Phila., 1864, p. 113.

*References.* Dall, 1905a, p. 75; Baker, F. C., 1911, p. 373.

*Type Locality.* Moose River near Hudson Bay.

*Range.* James Bay, northwest to Great Slave Lake.

**Stagnicola binneyi** Tryon 1865, Amer. Jour. Conch., vol. 1, p. 229.

*References.* Dall, 1905a, p. 69; Baker, F. C., 1911, p. 440.

*Type Locality.* Hellgate River, Oregon.

*Range.* Michigan; Washington; British Columbia; Manitoba; Western Ontario north of Lake Superior west to Washington; Alberta south to southern Idaho.



**Stagnicola bulimoides bulimoides** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 33.

*Reference.* Baker, F. C., 1911, p. 209.

*Type Locality.* Oregon.

*Range.* Vancouver Island, British Columbia, to California.

**Stagnicola bulimoides vancouverensis** F. C. Baker 1939, Nautilus, vol. 52, p. 144.

*Type Locality.* Hospital, Nanaimo, Vancouver Island, British Columbia.

*Range.* "Common in the southern part of Vancouver Island."

**Stagnicola caperata** Say 1829, New Harmony Dissem., 1829, p. 230.

*References.* Baker, F. C., 1911, p. 225; 1928, p. 260; 1939, p. 93; Robertson and Blakeslee, 1948, p. 56.

*Type Locality.* Indiana.

*Range.* Quebec and Massachusetts west to California. Yukon Territory and James Bay south to Maryland, Indiana, Colorado, and California.

**Stagnicola catascopium catascopium** Say 1817, Nicholson's Encycl., Amer. Ed., vol. 2, pl. 2, fig. 3.

*References.* Baker, F. C., 1911, p. 380; 1928, p. 250; Robertson and Blakeslee, 1948, p. 55.

*Type Locality.* Delaware River, Philadelphia, Pennsylvania.

*Range.* Nova Scotia west to North Dakota; Great Slave Lake south to northern Iowa, northern Ohio and Maryland.

**Stagnicola catascopium adamsi** F. C. Baker 1911, Lymnaeidae N. and M. America, p. 393.

*Reference.* Goodrich, 1932, p. 45.

*Type Locality.* St. Clair flats, Detroit, Michigan.

*Range.* Known only from the type locality.

**Stagnicola catascopium niagarensis** F. C. Baker 1911, Lymnaeidae N. and M. America, p. 391.

*Reference.* Robertson and Blakeslee, 1948, p. 55.

*Type Locality.* Niagara River, Lewiston, New York.

*Range.* New York: Niagara region; doubtfully, Ottawa, Ontario.

*Synonym.* *Lymnaea fusiformis* Lea *non* Sowerby.

**Stagnicola davisii** Walker 1908, Nautilus, vol. 22, p. 17.

*References.* Baker, F. C., 1911, p. 394; Goodrich, 1932, p. 45.

*Type Locality.* Fish Point, Tuscola County, Michigan.

*Range.* Saginaw Bay and St. Clair flats, Michigan. Probably also on the Canadian side of Lake St. Clair.

**Stagnicola decollata decollata** Mighels 1841, Proc. Boston Soc. Nat. Hist., vol. 1, p. 49.

*Reference.* Baker, F. C., 1911, p. 400.

*Type Locality.* Lake Winnecook, Unity, Waldo County, Maine.

*Range.* Maine.



**Stagnicola decollata oronensis** F. C. Baker 1904, Nautilus, vol. 18, p. 62.

*Reference.* Baker, F. C., 1911, p. 438.

*Type Locality.* Orono, Penobscot County, Maine.

*Range.* Maine to eastern Canada.

**Stagnicola desidiosa** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 169.

*References.* Dall, 1905a, p. 73; Baker, F. C., 1911, p. 316; Robertson and Blakeslee, 1948, p. 54.

*Type Locality.* Cayuga Lake, New York.

*Range.* Northern United States and northward. Alberta, Manitoba, British Columbia.

**Stagnicola elrodi** Baker and Henderson 1933, Nautilus, vol. 47, p. 30.

*Reference.* Henderson, 1936, p. 118.

*Type Locality.* Flathead Lake, Montana.

*Range.* Montana; possible for Alberta or Saskatchewan.

**Stagnicola emarginata emarginata** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 170.

*Reference.* Dall, 1905a, p. 68; Baker, F. C., 1911, p. 408; 1928, p. 234.

*Type Locality.* Lakes of Maine.

*Range.* Northern United States east of the Mississippi; Canada and northwestward.

**Stagnicola emarginata canadensis** Sowerby 1872, Conch. Icon., vol. 18, Limn., sp. 45, pl. 7, figs. 45, a.

*References.* Baker, F. C., 1911, p. 427; 1928, p. 239; Robertson and Blakeslee, 1948, p. 55.

*Type Locality.* Not known, probably in Canada.

*Range.* Anticosti west to Wisconsin, south to southern Michigan, northern Pennsylvania and southern New York.

*Synonym.* *Lymnaea laurentiana* Latchford.

**Stagnicola emarginata kempi** Baker and Cahn 1931, Freshwater Moll. Central Ont., p. 53.

*Reference.* Baker, F. C., 1939, p. 92.

*Type Locality.* Bamaji Lake outlet, on rocks in rapids.

*Range.* Type locality and Lake St. Joseph; Pashkokogan River; Rainy River district, Ontario; Minnesota.

**Stagnicola emarginata mighelsi** W. G. Binney 1865, Smiths. Misc. Coll. 143, p. 31, footnote.

*References.* Dall, 1905a, p. 68; Baker, F. C., 1911, p. 416.

*Type Locality.* Second Eagle Lake, Aroostook County, Maine.

*Range.* Maine, Quebec, and doubtfully, Ontario and Manitoba.

**Stagnicola emarginata ontariensis** "Mühlfeldt" Küster 1862, Chemn., ed. 2, p. 45.

*References.* Baker, F. C., 1911, p. 432; Robertson and Blakeslee, 1948, p. 55.

*Type Locality.* Not known; probably Canada.

*Range.* New York to Michigan, north to Central Ontario.

**Stagnicola emarginata serrata** Haldeman 1842, Mon. F. W. Moll., Limnaea, p. 12.

*References.* Baker, F. C., 1911, p. 421; 1928, p. 241.

*Type Locality.* "Northwest Territory".

*Range.* Michigan to Minnesota, south to central Wisconsin.

**Stagnicola emarginata vilasensis** F. C. Baker 1927, Nautilus, vol. 40, p. 82.

*Reference.* Baker, F. C., 1928, p. 243.

*Type Locality.* Big Muskallonge Lake, Vilas County, Wisconsin.

*Range.* Wisconsin to Minnesota.

**Stagnicola emarginata wisconsinensis** F. C. Baker 1910, Nautilus, vol. 24, p. 58.

*References.* Baker, F. C., 1911, p. 424; 1928, p. 245.

*Type Locality.* East shore Tomahawk Lake, Oneida County, Wisconsin.

*Range.* Wisconsin.

**Stagnicola exilis** Lea 1837, Trans. Amer. Phil. Soc., vol. 5, p. 114.

*References.* Baker, F. C., 1911, p. 343; 1928, p. 226.

*Type Locality.* Near Cincinnati, Ohio.

*Range.* Ohio to Kansas, northward to northern Minnesota and northern Michigan.

**Stagnicola hedleyi** F. C. Baker 1927, Nautilus, vol. 41, p. 23.

*Type Locality.* Red Pass Junction, source of Fraser River, British Columbia, altitude 3,394 ft.

*Range.* Known only from the type locality.

**Stagnicola holbölli** (Beck) Möller 1842, Index Moll. Grönl., p. 5.

*References.* Dall, 1905a, p. 74; Baker, F. C., 1911, p. 234.

*Type Locality.* Godthaab, Greenland.

*Range.* Greenland.

**Stagnicola johnsoni** F. C. Baker 1934, Can. Field Nat., vol. 48, p. 70.

*Type Locality.* Banff, Alberta.

*Range.* Mountain regions of Alberta and British Columbia and probably other parts of Canada.

**Stagnicola kennicotti** F. C. Baker 1933, Jour. Wash. Acad. Sci., vol. 23, p. 522.

*Type Locality.* Creek at Bernard Harbour, near Coronation Gulf, Mackenzie district, Canada.

*Range.* Known only from the type locality.

**Stagnicola kirtlandiana** Lea 1837, Trans. Amer. Phil. Soc., vol. 5, p. 114.

*References.* Dall, 1905a, p. 72; Baker, F. C., 1911, p. 348.

*Type Locality.* Poland, Ohio.

*Range.* Ohio west to South Dakota; northern Michigan south to northern Illinois.

**Stagnicola lanceata** Gould 1848, Proc. Boston Soc. Nat. Hist., vol. 3, p. 64.

*References.* Baker, F. C., 1911, p. 350; 1928, p. 228; 1939, p. 92.

*Type Locality.* Pic Lake, north shore of Lake Superior.

*Range.* Ontario south to northern Ohio, west to Wisconsin.

**Stagnicola lepida** Gould 1847, Proc. Boston Soc. Nat. Hist., vol. 2, p. 211.

*References.* Dall, 1905a, p. 67; Baker, F. C., 1911, p. 161; Henderson, 1929, p. 123.

*Type Locality.* "Lake Vancouver, Oregon" (now in State of Washington).

*Range.* California north to Washington; near Challis, Idaho; "doubtless to be found in British Columbia." (Dall).

*Remarks.* The Meach Lake, Quebec, record is erroneous.

**Stagnicola nasoni** F. C. Baker 1906, Trans. Acad. Sci. St. Louis, vol. 16, p. 12.

*References.* Baker, F. C., 1911, p. 397; 1939, p. 92.

*Type Locality.* Thunder Bay Island, near Alpena, Michigan.

*Range.* Michigan; doubtfully, Rainy River district, Ontario.

**Stagnicola newfoundlandensis** Baker and Brooks 1935, Nautilus, vol. 49, pp. 12-13.

*Reference.* Brooks and Brooks, 1940, p. 72.

*Type Locality.* Camp 31, 8 miles from Lomond, Bonne Bay, Newfoundland.

*Range.* Known only from the type locality.

**Stagnicola pallida** Adams 1840, Amer. Jour. Sci., vol. 39, p. 374.

*References.* Baker, F. C., 1911, p. 377; Robertson and Blakeslee, 1948, p. 56.

*Type Locality.* Shoreham, Lake Champlain, Vermont.

*Range.* Vermont to Michigan.

*Remarks.* The Ottawa, Ontario, record is erroneous.

**Stagnicola palustris palustris** Müller 1774, Verm. Terr. et Fluv., vol. 2, p. 131.

*References.* Dall, 1905a, p. 76; Brooks and Brooks, 1940, p. 75; Baker, F. C., 1911, p. 298.

*Type Locality.* Europe.

*Range.* Circumboreal. All Canada and northern United States.

**Stagnicola palustris alpenensis** F. C. Baker 1911, Lymnaeidae N. and M. America, p. 315.

*References.* Whittaker, 1924, p. 11; Baker and Cahn, 1931, p. 53.

*Type Locality.* Thunder Bay Island, near Alpena, Michigan.

*Range.* Michigan shore of Lake Huron; Bamaji Lake, Ontario; Mackenzie River basin.

**Stagnicola palustris elodes** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 169.

*References.* Baker, F. C., 1911, p. 322; 1928, p. 212; Robertson and Blakeslee, 1948, p. 51.

*Type Locality.* Canandaigua Lake, New York.

*Range.* Canada and the United States east of the Rockies.

**Stagnicola palustris nuttalliana** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 33.

*References.* Dall, 1905a, p. 76; Eyerdam, 1937, p. 72.

*Type Locality.* Oregon.

*Range.* Western Canada and United States.

**Stagnicola palustris papyracea** Baker and Brooks 1935, Nautilus, vol. 49, p. 10.

*Reference.* Brooks and Brooks, 1940, p. 70.

*Type Locality.* Rocky Pond near Whitbourne, Newfoundland.

*Range.* Known only from the type locality.

**Stagnicola palustris perpallustris** Baker and Brooks 1935, Nautilus, vol. 49, p. 11.

*Reference.* Brooks and Brooks, 1940, p. 65.

*Type Locality.* Pools along Exploits River, Grand Falls, Newfoundland.

*Range.* Known only from the type locality.

**Stagnicola palustris ungava** F. C. Baker 1933, Jour. Wash. Acad. Sci., vol. 23, p. 523.

*Type Locality.* Fort Chimo, Kuksoak River, near Ungava Bay, Labrador.

*Range.* Known only from the type locality.

**Stagnicola perpolita** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 78.

*Reference.* Baker, F. C., 1911, p. 224.

*Type Locality.* Nushagak, Bristol Bay, Alaska.

*Range.* Alaska.

**Stagnicola petersi** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 66.

*Reference.* Baker, F. C., 1911, p. 456.

*Type Locality.* Koyukuk River, north of the Yukon, Alaska.

*Range.* Known only from the type locality.

**Stagnicola pilsbryana** Walker 1908, Nautilus, vol. 22, pp. 4, 18-19.

*Reference.* Baker, F. C., 1911, p. 435.

*Type Locality.* Washington Harbour, Isle Royale, Lake Superior, Michigan.

*Range.* Known only from the type locality.

**Stagnicola preblei** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 70.

*Reference.* Baker, F. C., 1911, p. 450.

*Type Locality.* "English River, Manitoba; Knee Lake, Keewatin."

*Range.* Type locality and Clear Lake, Manitoba; Isle La Crosse Lake, Saskatchewan.

**Stagnicola randolphi** F. C. Baker, 1904 Nautilus, vol. 18, p. 63.

*Reference.* Baker, F. C., 1911, p. 452.

*Type Locality.* Marsh Lake, near Dyea Valley, "Alaska." Later corrected (Baker, 1911) to Yukon.

*Range.* Alaska, Yukon, British Columbia, Washington.

**Stagnicola reflexa reflexa** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 167.

*References.* Baker, F. C., 1911, p. 332; 1928, p. 221.

*Type Locality.* Lake Superior.

*Range.* Eastern Quebec west to Nebraska; Manitoba south to southern Illinois and southern Kansas.

**Stagnicola reflexa walkeri** F. C. Baker 1902, Moll. Chicago Area, p. 341.

*Reference.* Baker, F. C., 1911, p. 341.

*Type Locality.* Rouge River, Wayne County, Michigan.

*Range.* Illinois, Indiana, Michigan, Ohio.

**Stagnicola reflexa zebra** Tryon 1865, Amer. Jour. Conch., vol. 1, p. 228.

*Reference.* Baker, F. C., 1911, p. 344.

*Type Locality.* Minnesota.

*Range.* Minnesota, Michigan.

**Stagnicola saskatchewanensis** Mozley 1932, Amer. Midl. Nat., vol. 13, p. 236.

*Type Locality.* Beaubier, Saskatchewan; interglacial.

*Range.* Known only from the type locality.

**Stagnicola sumassi** Baird 1863, Proc. Zool. Soc. London, 1863, p. 68.

*Reference.* Baker, F. C., 1911, p. 403.

*Type Locality.* Sumas Prairie, British Columbia.

*Range.* British Columbia south to northern Utah.

**Stagnicola traskii traskii** Tryon 1863, Proc. Acad. Nat. Sci. Phila., 1863, p. 149.

*References.* Baker, F. C., 1911, p. 368; Mozley, 1928b, pp. 286-288.

*Type Locality.* Mountain Lake, California.

*Range.* California to Wyoming and Alberta.

**Stagnicola traskii castorensis** Mozley 1930, Trans. Roy. Soc. Edinb., vol. 56, pp. 658-659.

*Type Locality.* Pond formed by beavers, small stream one mile above Medicine Lake on the Medicine-Jacques Lake trail, Jasper National Park, Alberta, Canada.

*Range.* Known only from the type locality.

**Stagnicola tryonii** "Lea" Tryon 1865, Amer. Jour. Conch., vol. 1, p. 251.

*Reference.* Baker, F. C., 1911, p. 365.

*Type Locality.* Arroyo San Antonio, California.

*Range.* Vancouver Island, British Columbia, south to southern California, west of the Sierra Nevadas.

**Stagnicola umbrosa umbrosa** Say 1832, Amer. Conchol., p. iv, pl. 31, fig. 2.

*Reference.* Baker, F. C., 1928, p. 218.

*Type Locality.* Waters of the Missouri near Council Bluffs, Iowa.

*Range.* Western New York to South Dakota; Rainy Lake, Ontario, south to northern Kansas and Ohio.

*Synonym.* *Limneus elongatus* Say 1821, preoccupied.

**Stagnicola umbrosa jolietensis** F. C. Baker 1901, Nautilus, vol. 15, p. 17.

*References.* Baker, F. C., 1911, p. 327; 1928, p. 220.

*Type Locality.* Rock Run, Joliet, Illinois.

*Range.* Wisconsin to eastern New York; central Michigan south to northern Illinois and northern Ohio.

**Stagnicola vahlii vahlii** "Beck" Möller 1842, Index Moll. Grönl., p. 4.

*References.* Dall, 1905a, p. 74; Baker, F. C., 1911, p. 370.

*Type Locality.* Amaraglik, Greenland.

*Range.* Greenland to Alaska and south to Great Slave Lake and Ungava.

**Stagnicola vahlii elongata** (Möller) Mörch 1868, Amer. Jour. Conch., vol. 4, p. 40.

*Reference.* Dall, 1905a, p. 75.

*Type Locality.* None given.

*Range.* Greenland.

*Remarks.* Included in the synonymy of *S. vahlii* by Baker (1911, p. 370).

**Stagnicola vahlii pingelii** (Beck) Möller 1842, Index Moll. Grönl., p. 5.

*References.* Dall, 1905a, p. 75; Baker, F. C., 1911, p. 374.

*Type Locality.* Tank on the north shore of Baal's River, vicinity of Nepiset Sound, Greenland.

*Range.* Western Greenland to western Alaska. Yukon.

**Stagnicola walkeriana** F. C. Baker 1926, Nautilus, vol. 39, p. 119.

*Reference.* Baker, F. C., 1928, p. 247.

*Type Locality.* Madeline Island, near Bayfield, Wisconsin.

*Range.* Lakes Superior and Michigan.

**Stagnicola woodruffi** F. C. Baker 1901, Bull. Chicago Acad. Sci., vol. 2, p. 229.

*References.* Baker, F. C., 1911, p. 398; 1928, p. 256; Robertson and Blakeslee, 1948, p. 56.

*Type Locality.* Lake Michigan, Oak Street, Chicago, Illinois.

*Range.* States bordering Lake Michigan: Michigan, Indiana, Illinois, Wisconsin.

**Stagnicola yukonensis** F. C. Baker 1934, Can. Field-Nat., vol. 48, p. 69.

*Type Locality.* Pond at Atlin, British Columbia.

*Range.* Alaska, Yukon Territory, and British Columbia.

#### Genus *Acella* Haldeman 1841

**Acella haldemani** "Deshayes" Binney 1867, Jour. de Conch., vol. 15, p. 428.

*References.* Baker, F. C., 1911, p. 192; 1928, p. 266; Herrington, H. B., 1947, pp. 20-25; Robertson and Blakeslee, 1948, p. 56.

*Type Locality.* Lake Champlain.

*Range.* Lakes Huron and Ontario; Lake Simcoe; Lake Champlain, Quebec and Vermont. Illinois, Michigan, Minnesota, New York, Ohio, Wisconsin.

*Synonym.* *Lymnaea gracilis* Jay.

#### Genus *Pseudosuccinea* F. C. Baker 1908

**Pseudosuccinea columella** Say 1817, Jour. Acad. Nat. Sci. Phila., vol. 1, p. 14.

*References.* Dall, 1905a, p. 70; Baker, F. C., 1911, p. 162; 1928, p. 272; Robertson and Blakeslee, 1948, p. 57.



*Type Locality.* Not given. Probably near Philadelphia, Pennsylvania.  
*Range.* Manitoba to New England and Nova Scotia, New Mexico, and Georgia. Minnesota.

Genus *Bulimnea* Haldeman 1841

***Bulimnea megasoma*** Say 1824, Rept. Long's Exped., vol. 2, p. 263.

*References.* Dall, 1905a, p. 67; Baker, F. C., 1911, p. 184; 1928, p. 277; 1939, p. 93.

*Type Locality.* Bois Blanc Lake, Manitoba.

*Range.* New England, Quebec, Ontario, and Manitoba to lat. 41° (Ohio) and 57° (Canada).

Genus *Fossaria* Westerlund 1885

***Fossaria exigua*** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 33.

*References.* Baker, F. C., 1911, p. 285; 1928, p. 301; Robertson and Blakeslee, 1948, p. 59.

*Type Locality.* Tennessee.

*Range.* Maine west to Iowa and Minnesota, northern Michigan south to Tennessee.

***Fossaria galbana*** Say 1825, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 123.

*References.* Dall, 1905a, p. 73; Baker, F. C., 1911, p. 291; 1928, p. 304.

*Type Locality.* Marl pit near Franklin, New Jersey.

*Range.* Pleistocene of New Brunswick and Anticosti to Yukon, Alaska, and California.

***Fossaria humilis*** Say 1822, Jour. Acad. Nat. Sci., Phila., vol. 2, p. 378.

*References.* Dall, 1905a, p. 73; Baker, F. C., 1911, p. 257.

*Type Locality.* South Carolina.

*Range.* Georgia to Kansas and northward. Lake Superior; Lake Winnipeg; Manitoba.

***Fossaria modicella modicella*** Say 1825, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 122.

*References.* Baker, F. C., 1911, p. 259; 1928, p. 289; Robertson and Blakeslee, 1948, p. 58.

*Type Locality.* Owego, Tioga County, New York, on the Susquehanna River.

*Range.* Nova Scotia, Quebec, and New Jersey west to Vancouver Island, British Columbia. Manitoba south to southern California, Arizona, Texas, and Alabama.

**Fossaria modicella rustica** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 33.

*References.* Baker, F. C., 1911, p. 268; 1928, p. 291; Robertson and Blakeslee, 1948, p. 58.

*Type Locality.* Poland, Ohio.

*Range.* New York to Utah, Nebraska south to New Mexico.

**Fossaria obrussa obrussa** Say 1825, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 123.

*References.* Baker, F. C., 1911, p. 270; 1928, p. 293; Brooks and Brooks, 1940, p. 75; Robertson and Blakeslee, 1948, p. 59.

*Type Locality.* Harrowgate, Philadelphia County, Pennsylvania.

*Range.* Atlantic to Pacific; Mackenzie district south to Arizona and New Mexico.

**Fossaria obrussa brooksi** F. C. Baker 1935, Nautilus, vol. 49, p. 13.

*Reference.* Brooks and Brooks, 1940, pp. 72, 75.

*Type Locality.* Camp 31, 8 miles from Lomond, Bonne Bay, Newfoundland.

*Range.* Known only from the type locality.

**Fossaria obrussa decampi** Streng 1906, Nautilus, vol. 9, p. 123.

*References.* Baker, F. C., 1911, p. 289; 1928, p. 299; Robertson and Blakeslee, 1948, p. 59.

*Type Locality.* Brook's Lake, Newaygo County, Michigan.

*Range.* Maine to Wisconsin; northern Michigan south to northern Illinois.

**Fossaria obrussa peninsulae** Walker 1908, Nautilus, vol. 22, pp. 9, 16.

*References.* Baker, F. C., 1911, p. 283; 1928, p. 298.

*Type Locality.* Headwaters of the Union River, Ontonagon County, Michigan.

*Range.* Northern Maine west to Wisconsin.

**Fossaria owascoensis** F. C. Baker 1905, Nautilus, vol. 18, p. 141.

*References.* Baker, F. C., 1911, p. 250; Robertson and Blakeslee, 1948, p. 56.

*Type Locality.* Owasco Lake, New York.

*Range.* New York State.

*Remarks.* Robertson and Blakeslee (1948, p. 56) place this species in the genus *Stagnicola*. It is assigned to *Fossaria* here following Baker (1911, p. 251) who states that its nearest ally is *F. parva*.

**Fossaria parva parva** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 33.

*References.* Baker, F. C., 1911, p. 243; 1928, p. 285; Robertson and Blakeslee, 1948, p. 57.

*Type Locality.* Cincinnati, Ohio.

*Range.* Connecticut west to Idaho, James Bay, and Montana, south to Maryland, Kentucky, Oklahoma, New Mexico, and Arizona.

**Fossaria parva sterkii** F. C. Baker 1905, *Nautilus*, vol. 19, p. 51.

*References.* Baker, F. C., 1911, p. 248; Robertson and Blakeslee, 1948, p. 58.

*Type Locality.* Twelve miles west of Cleveland, Ohio.

*Range.* Central New York to Minnesota, south to Tennessee.

**Fossaria sayi** F. C. Baker 1928, *Freshwater Moll. Wis.*, p. 305.

*Reference.* Robertson and Blakeslee, 1948, p. 62.

*Type Locality.* Squaw Island, near Buffalo, New York.

*Range.* Great Lakes region; New York to Michigan; Ontario.

**Fossaria truncatula** Müller 1774, *Verm. Terr. et Fluv.*, vol. 2, p. 130.

*References.* Dall, 1905a, p. 72; Baker, F. C., 1911, p. 201.

*Type Locality.* Europe.

*Range.* Europe, northern Asia, Alaska; Mackenzie River; Manitoba; Moose Factory.

**Fossaria umbilicata** C. B. Adams 1840, *Amer. Jour. Sci.*, 1st ser., vol. 39, p. 374.

*Reference.* Baker, F. C., 1911, p. 236; Brooks and Brooks, 1940, p. 75.

*Type Locality.* New Bedford, Massachusetts.

*Range.* Connecticut, Maine, Massachusetts, Michigan, New Jersey, New York, Rhode Island. Newfoundland; Ontario: Ottawa.

#### Family PLANORBIDAE

##### Genus *Helisoma* Swainson 1840

**Helisoma ammon** Gould 1855, *Proc. Boston Soc. Nat. Hist.*, vol. 5, p. 129.

*References.* Binney, W. G., 1865, p. 112; Henderson, 1929, p. 136.

*Type Locality.* "Cienaga Grande, or Colorado Low Desert."

*Range.* California, Oregon, and possibly British Columbia.

**Helisoma anceps anceps** Menke 1830, *Syn. Meth. Mus. Menkeano*, p. 36.

*References.* Binney, W. G., 1865, p. 125 (*antrosa*); Baker, F. C., 1928, p. 317; 1939, p. 93; Robertson and Blakeslee, 1948, p. 65.

*Type Locality.* Virginia.

*Range.* Maine to Oregon; Hudson Bay south to Western Mexico.

*Synonyms.* *Planorbis antrosus* Conrad, *P. bicarinatus* Say.

**Helisoma anceps anticostianum** F. C. Baker 1945, *Moll. Fam. Planorbidae*, p. 219.

*Type Locality.* English Bay, Anticosti Island, Quebec, Canada; Pleistocene.

*Range.* Known only from the type locality.

**Helisoma anceps aroostookense** Pilsbry 1895, Nautilus, vol. 8, p. 115.

*Reference.* Baker, F. C., 1945, plate 83, figs. 27-29.

*Type Locality.* East branch of Salmon brook, Woodland, Aroostook County, Maine.

*Range.* Maine.

**Helisoma anceps latchfordi** Pilsbry 1927, Nautilus, vol. 40, p. 79.

*References.* LaRocque, 1933c, p. 134; Baker, F. C., 1945, pl. 85, figs. 5-7.

*Type Locality.* Meach Lake, Quebec.

*Range.* Meach Lake drainage, Quebec; Gilmour Lake, Algonquin Park, Ontario; doubtfully, Lake Memphremagog and Brome Lake, Quebec.

**Helisoma anceps percarinatum** Walker 1909, Nautilus, vol. 6, p. 136.

*Reference.* Baker, F. C., 1928, p. 324.

*Type Locality.* Crystal Lake, Benzie County, Michigan.

*Range.* Michigan to Minnesota and Ontario; Great Lakes region.

**Helisoma anceps politum** F. C. Baker 1945, Moll. Fam. Planorbidae, p. 221.

*Type Locality.* Honeywell Creek, Carleton County, Ontario, Canada.

*Range.* Known only from the type locality.

**Helisoma anceps portagense** F. C. Baker 1908, Nautilus, vol. 22, p. 45.

*Reference.* Baker, F. C., 1945, pl. 85, figs. 1-4.

*Type Locality.* Portage Lake, Aroostook County, Maine.

*Range.* Maine; Michigan.

**Helisoma anceps royalense** Walker 1909, Nautilus, vol. 23, p. 9.

*Reference.* Baker, F. C., 1939, p. 94.

*Type Locality.* Siskowit Lake, Isle Royale, Lake Superior, Michigan.

*Range.* Michigan; Rainy River and Thunder Bay districts, Ontario.

**Helisoma anceps rushi** F. C. Baker 1939, Can. Jour. Res., sec. D, vol. 17, p. 94.

*Reference.* Baker, F. C., 1945, pl. 84, figs. 10-12.

*Type Locality.* Toad Island, Georgian Bay, Ontario.

*Range.* Minnesota; Rainy River, Kenora district, and Georgian Bay, Ontario.

**Helisoma anceps sayi** F. C. Baker 1928, Freshwater Moll. Wis., p. 322.

*Reference.* Baker, F. C., 1939, p. 93.

*Type Locality.* Tomahawk Lake, Oneida County, Wisconsin.

*Range.* Great Lakes region in Michigan, Wisconsin, Minnesota, Manitoba, New York, Ontario, and Quebec.

**Helisoma anceps striatum** F. C. Baker 1902, Nautilus, vol. 15, p. 120.

*Reference.* Baker, F. C., 1928, p. 328.

*Type Locality.* Coldspring Park, Milwaukee, Wisconsin; Pleistocene.

*Range.* Pleistocene deposits of Wisconsin, Illinois, Michigan, and Ontario. Interglacial; Toronto.

**Helisoma anceps unicarinatum** Haldeman 1844, Mon. Limn., p. 7.

*Reference.* Baker, F. C., 1928, p. 321.

*Type Locality.* Schuylkill River, near Philadelphia, Pennsylvania.

*Range.* Connecticut and Pennsylvania west to Wisconsin and south to Illinois.

**Helisoma binneyi** Tryon 1867, Amer. Jour. Conch., vol. 3, p. 197.

*Reference.* Dall, 1905a, p. 87.

*Type Locality.* None given.

*Range.* West of the Rockies and east of the Cascade Mountains on the Pacific slope. California, Oregon, and British Columbia.

**Helisoma campanulatum campanulatum** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 166.

*References.* Dall, 1905a, p. 90; Baker, F. C., 1928, p. 345; 1939, p. 97; Robertson and Blakeslee, 1948, p. 69.

*Type Locality.* Cayuga Lake, New York.

*Range.* Vermont west to North Dakota, south to Ohio and Illinois, north to Great Slave Lake.

**Helisoma campanulatum canadense** Baker and Cahn, 1931, Freshwater Moll. Central Ont., p. 57.

*Reference.* Baker, F. C., 1939, p. 97.

*Type Locality.* Bamaji Lake, northern Ontario.

*Range.* Lake of the Woods area; northern Ontario generally.

**Helisoma campanulatum collinsi** F. C. Baker 1939, Can. Jour. Res., sec. D, vol. 17, p. 97.

*Reference.* Baker, F. C., 1945, pl. 110, figs. 27-35, pl. 111, figs. 17-19.

*Type Locality.* Cameron Lake, northeast of Kakagi Lake (Lake of the Woods).

*Range.* Lake of the Woods district.

**Helisoma campanulatum dalli** F. C. Baker 1945, Moll. Fam. Planorbidae, p. 226.

*Type Locality.* Anticosti Island, Quebec, Canada.

*Range.* Known only from the type locality, in marl deposits.

**Helisoma campanulatum davisi** Winslow 1926, Occ. Papers Mus. Zoöl. Univ. Mich., No. 180, p. 8.

*Reference.* Baker, F. C., 1928, p. 349; Brooks and Brooks, 1940, p. 75.

*Type Locality.* Pinnebog River, Huron County, Michigan.

*Range.* Michigan and Wisconsin. Newfoundland (Brooks and Brooks).

**Helisoma campanulatum ferrissi** F. C. Baker 1922, Trans. III Acad. Sci., vol. 15, p. 412.

*Reference.* Baker, F. C., 1928, p. 350.

*Type Locality.* Fair Grounds Quarry, Joliet, Illinois; Pleistocene.

*Range.* Illinois, Wisconsin, and Michigan.

**Helisoma campanulatum rideauense** F. C. Baker 1945, Moll. Fam. Planorbidae, p. 227.

*Type Locality.* Rideau River, Ottawa, Ontario, Canada.

*Range.* Known only from the type locality.

**Helisoma campanulatum rudentis** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 90.

*References.* Baker, F. C. and Cahn, 1931, p. 58; Baker, F. C., 1945, pl. 111, figs. 1-5.

*Type Locality.* Knee Lake, Keewatin (now Manitoba).

*Range.* Known only from the type locality.

**Helisoma campanulatum smithii** F. C. Baker 1912, Nautilus, vol. 25, p. 118.

*References.* Robertson, A. D., 1915, p. 101; Whittaker, 1919, p. 128; Baker, F. C., 1928, p. 353; 1945, p. 153.

*Type Locality.* Douglas Lake, Michigan.

*Range.* Michigan and Georgian Bay area.

**Helisoma campanulatum wisconsinense** Winslow 1926, Occ. Papers Mus. Zool. Univ. Mich., No. 180, p. 5.

*Reference.* Baker, F. C., 1928, p. 351.

*Type Locality.* Little Arbor Vitae Lake, Vilas County, Wisconsin.

*Range.* Wisconsin, Michigan, Quebec, Ontario, Manitoba.

**Helisoma columbiense** F. C. Baker 1945, Moll. Fam. Planorbidae, p. 222.

*Type Locality.* Lac La Hache, Cariboo District, British Columbia.

*Range.* Known only from the type locality.

**Helisoma corpulentum corpulentum** Say 1824, Rept. Long's Exped., vol. 2, p. 262.

*References.* Dall, 1905a, p. 87; Baker, F. C., 1928, p. 337; 1936, p. 5; 1939, p. 96.

*Type Locality.* "Winnepeck River, Winnepeck Lake, Lake of the Woods and Rainy Lake, Canada."

*Range.* Northern Ontario and Manitoba, Michigan and Minnesota.

**Helisoma corpulentum multicostatum** F. C. Baker 1932, Nautilus, vol. 46, p. 7.

*References.* Baker, F. C., 1936, p. 8; 1939, p. 96.

*Type Locality.* Kahnipiminanikok Lake, Rainy River district, Ontario.

*Range.* Lakes of western Ontario.



**Helisoma corpulentum vermillionense** F. C. Baker 1936, Nat. Mus. Canada, Bull. 79, p. 7.

*Reference.* Baker, F. C., 1945, pl. 107, figs. 8-11, 14.

*Type Locality.* Vermilion Lake, St. Louis County, Minnesota.

*Range.* Known only from the type locality.

**Helisoma hornii** Tryon 1865, Amer. Jour. Conch., vol. 1, p. 231.

*Reference.* Baker, F. C., 1936, p. 14.

*Type Locality.* Simpson (British Columbia or Mackenzie River, not specified in original description).

*Range.* British Columbia; Mackenzie River southward into south-central British Columbia.

**Helisoma kennicotti** F. C. Baker 1945, Moll. Fam. Planorbidae, p. 223.

*Type Locality.* Lake Isle La Crosse, English River, Canada.

*Range.* Known only from the type locality.

**Helisoma pilsbryi pilsbryi** F. C. Baker 1909, Nautilus, vol. 23 p. 41.

*References.* Baker, F. C., 1928, p. 334; 1936, p. 19.

*Type Locality.* Tomahawk Lake, Oneida County, Wisconsin.

*Range.* New Brunswick and Massachusetts west to Minnesota; northern New York and central Wisconsin northward.

**Helisoma pilsbryi infracarinatum** F. C. Baker 1932, Nautilus, vol. 46, p. 8.

*References.* Baker, F. C., 1936, p. 19; 1939, p. 96.

*Type Locality.* Basswood River rapids, Rainy River district, Ontario.

*Range.* Canada and United States; in Canada, Quebec to Manitoba.

**Helisoma pilsbryi preblei** F. C. Baker 1945, Moll. Fam. Planorbidae, p. 224.

*Type Locality.* Knee Lake, Manitoba, Canada.

*Range.* Known only from the type locality.

**Helisoma plexatum** Ingersoll 1874, U. S. Geol. and Geogr. Surv. Terr., p. 402.

*Reference.* Baker, F. C., 1936, p. 13.

*Type Locality.* St. Mary Lake, Mineral County, Colorado.

*Range.* Idaho, Montana, Washington, northward into Canada and eastward to Hannah Bay, James Bay, Lake Winnipeg, and Athelstane Lake, Ontario.

**Helisoma pseudotrivolvis** F. C. Baker 1920, Nautilus, vol. 33, p. 123.

*Reference.* Baker, F. C., 1928, p. 342.

*Type Locality.* Old river bed of Salt Fork, north of Urbana, Illinois.

*Range.* Illinois, Wisconsin, Indiana, Michigan, New York, South Dakota.

*Remarks.* Baker notes that it may occur throughout the range of *H. trivolvis*.



**Helisoma subcrenatum** Carpenter 1856, Proc. Zoöl. Soc. London, 1856, p. 220.

*Reference.* Baker, F. C., 1936, p. 16.

*Type Locality.* "Oregon."

*Range.* Utah to Alberta, Saskatchewan, and Mackenzie District.

**Helisoma trivolvis trivolvis** Say 1817, Nicholson's Encycl., 1st Amer. Ed., vol. 2, pl. 2, fig. 2.

*References.* Dall, 1905a, p. 88; Baker, F. C., 1928, p. 330; 1936, p. 11; Robertson and Blakeslee, 1948, p. 68.

*Type Locality.* French Creek, near Lake Erie.

*Range.* Atlantic and Mississippi drainages, north to Arctic coast of Canada and Alaska, south to Tennessee and Missouri.

*Remarks.* The range may be much less extensive as many other species of *Helisoma* have been confused with this species.

**Helisoma trivolvis macrostomum** Whiteaves 1863, Can. Nat., vol. 8, p. 113.

*References.* Baker, F. C., 1928, p. 331 (synonym of *H. trivolvis*); 1936, p. 18; Robertson and Blakeslee, 1948, p. 69.

*Type Locality.* Mile End ponds, Montreal, Quebec.

*Range.* Maine, Quebec, Ontario, Manitoba, Saskatchewan, Wisconsin, and Minnesota.

*Remarks.* The type locality has long since been drained and built over.

**Helisoma truncatum** Miles 1861, Winchell's Geol. Surv. Mich., p. 238.

*References.* Baker, F. C., 1928, p. 339; Robertson and Blakeslee, 1948, p. 69.

*Type Locality.* Saginaw Bay, Michigan.

*Range.* Michigan, northern Illinois, and Wisconsin.

**Helisoma whiteavesi** F. C. Baker 1932, Nautilus, vol. 46, p. 7.

*References.* Baker, F. C., 1936, p. 10; 1939, p. 96.

*Type Locality.* Lac des Mille Lacs, Thunder Bay district, Ontario.

*Range.* Thunder Bay and Rainy River districts, Ontario.

#### Genus *Planorbula* Haldeman 1842

**Planorbula armigera** Say 1818, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 164.

*References.* Dall, 1905a, p. 98; Baker, F. C., 1928, p. 355; 1939, p. 98.

*Type Locality.* Upper Missouri.

*Range.* New England to Great Slave Lake; Manitoba, Saskatchewan, Ontario, south to Georgia and Louisiana.

**Planorbula campestris** Dawson 1875, Rept. Geol. and Res. 49th Par., App. E, p. 349.

*References.* Dall, 1905a, p. 99 (*P. christyi*); Baker, F. C., 1945, p. 176.

*Type Locality.* "Pointe du Chêne; Dufferin; Traders' Road, 500-mile Lake."

*Range.* Manitoba; Mackenzie River.

*Synonym.* *P. christyi* Dall 1905.

**Planorbula crassilabris** Walker 1907, Nautilus, vol. 20, p. 122.

*References.* Baker, F. C., 1928, p. 359; 1945, p. 176.

*Type Locality.* "Hamtramck, Wayne County, Michigan."

*Range.* Michigan, Iowa, Ontario.

**Planorbula jenksii** H. F. Carpenter 1887, Conchologists' Exchange, vol. 2, p. 2.

*References.* Baker, F. C., 1945, p. 176; Robertson and Blakeslee, 1948, p. 70.

*Type Locality.* Rhode Island (by implication).

*Range.* New England States; southwestern Ontario.

Genus *Menetus* H. and A. Adams 1855

**Menetus opercularis opercularis** Gould 1847, Proc. Boston Soc. Nat. Hist., vol. 2, p. 212.

*Reference.* Dall, 1905a, p. 92.

*Type Locality.* Sacramento River, California.

*Range.* San Francisco northward, west of Sierra Nevada.

**Menetus opercularis planulatus** Cooper 1859, Rept. Nat. Hist. Wash. Terr., p. 378.

*References.* Binney, W. G., 1865, p. 126; Dall, 1905a, p. 92.

*Type Locality.* "Lakes on Whidby's Island at the entrance of Puget Sound." (Cooper).

*Range.* Puget Sound to Alaska.

Genus *Promenetus* F. C. Baker 1935

**Promenetus exacuus exacuus** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 168.

*References.* Dall, 1905a, p. 91; Baker, F. C., 1928, p. 361; Robertson and Blakeslee, 1948, p. 70.

*Type Locality.* Lake Champlain.

*Range.* Northern United States east of the Rockies; Canada to New Mexico.

**Promenetus exacuus megas** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 91.

*References.* Baker, F. C., 1928, p. 363; Robertson and Blakeslee, 1948, p. 71.

*Type Locality.* Birtle, Manitoba.

*Range.* Canada, Minnesota, Wisconsin, Michigan,

**Promenetus umbilicatellus** Cockerell 1887, Conchol. Exch., vol. 2, p. 68.

*References.* Taylor, J. W., 1885, p. 351 (*P. umbilicatus*); Dall, 1905a, p. 96; Baker, F. C., 1928, p. 383; Robertson and Blakeslee, 1948, p. 71.

*Type Locality.* "Brandon and Birtle, Manitoba."

*Range.* New Mexico, Colorado, Montana, Iowa, Minnesota, Manitoba, Alberta, Illinois, Michigan, South Dakota, North Dakota, Wisconsin.

*Synonym.* *Planorbis umbilicatus* Taylor 1885 *non* Müller 1774.

Genus *Gyraulus* J. de Charpentier 1837

**Gyraulus altissimus** F. C. Baker 1919, Nautilus, vol. 32, p. 95.

*References.* Baker, F. C., 1928, p. 382; Robertson and Blakeslee, 1948, p. 64.

*Type Locality.* Urbana, Illinois; Pleistocene.

*Range.* Pleistocene of Ohio, Indiana, Illinois, Michigan, Ontario; interglacial, Toronto, Ontario.

**Gyraulus arcticus** (Beck) Möller 1842, Index Moll. Grönl., p. 5.

*References.* Dall, 1905a, p. 96; Baker, F. C., 1928, p. 380.

*Type Locality.* Kudsuk, Greenland.

*Range.* West Greenland; Fort Chimo, Ungava, Labrador. Fossil in Illinois.

**Gyraulus circumstriatus circumstriatus** Tryon 1866, Amer. Journ. Conch., vol. 2, p. 113.

*References.* Baker, F. C., 1928, p. 378; Robertson and Blakeslee, 1948, p. 64.

*Type Locality.* Artificial pond at Weatogue, Connecticut.

*Range.* Connecticut west to Wisconsin.

**Gyraulus circumstriatus walkeri** Vanatta 1902, Nautilus, vol. 16, p. 58.

*References.* Baker, F. C., 1928, p. 379; Robertson and Blakeslee, 1948, p. 64.

*Type Locality.* Hartland, Vermont.

*Range.* Ontario and Quebec, Vermont and New York, south to Illinois and Indiana.

**Gyraulus crista** Linné 1758, Syst. Nat. Ed. 10, p. 709.

*References.* Dall, 1905a, p. 96; Baker, F. C., 1928, p. 385; Robertson and Blakeslee, 1948, p. 65.

*Type Locality.* Europe.

*Range.* Europe, Maine, Ontario, Michigan, Alberta, Manitoba, Illinois.

*Remarks.* This species is placed in the genus *Armiger* by Baker, 1945.

**Gyraulus cyclostomus** F. C. Baker 1934, Can. Field-Nat., vol. 48, p. 37.

*Reference.* Baker, F. C., 1945, p. 71.

*Type Locality.* Rosetown, Saskatchewan; interglacial.

*Range.* Known only from the type locality.

**Gyraulus deflectus deflectus** Say 1824, Long's Exped., vol. 2, p. 261.

*References.* Dall, 1905a, p. 94; Baker, F. C., 1928, p. 370; Robertson and Blakeslee, 1948, p. 63.

*Type Locality.* "Northwest Territory".

*Range.* New England to Alaska.

**Gyraulus deflectus obliquus** De Kay 1843, Zoology of N. Y., pt. 5, p. 62.

*References.* Baker, F. C., 1928, p. 372; 1939, p. 98; Robertson and Blakeslee, 1948, p. 63.

*Type Locality.* Mohawk and Newcomb's Pond, Pittstown, New York.

*Range.* Probably same as that of the typical form.

**Gyraulus hirsutus** Gould 1840, Amer. Jour. Sci., 1st ser., vol. 38, p. 196.

*References.* Dall, 1905a, p. 93; Baker, F. C., 1928, p. 367; Robertson and Blakeslee, 1948, p. 63.

*Type Locality.* "Mansfield, Dedham and Cambridge, Massachusetts."

*Range.* New England to Great Slave Lake.

**Gyraulus hornensis** F. C. Baker 1934, Can. Field-Nat., vol. 48, p. 135.

*Reference.* Baker, F. C., 1939, p. 98; Brooks and Brooks, 1940, p. 75;

*Type Locality.* Horn River, Mackenzie district.

*Range.* Type locality and lakes in Rainy River district. Newfoundland (Brooks and Brooks).

**Gyraulus latistomus** F. C. Baker 1932, Nautilus, vol. 46, p. 9.

*References.* Baker, F. C., 1939, p. 98; 1934a, p. 71.

*Type Locality.* McAree Lake, Rainy River district, Ontario.

*Range.* Known only from the type locality and doubtfully, Cedar Lake, Algonquin Park, Ontario.

*Remarks.* The specific name is spelled *latestomus* by Baker (1939).

**Gyraulus nathorsti** Westerlund 1887, Vega Exped., vol. 4, p. 168.

*References.* Posselt, 1898, p. 262; Dall, 1905a, p. 96.

*Type Locality.* Aulatsivik, West Greenland.

*Range.* West Greenland; Labrador.

**Gyraulus parvus** Say 1817, Nicholson's Encycl., vol. 1, pl. 2.

*References.* Dall, 1905a, p. 96; Baker, F. C., 1928, p. 374; Brooks and Brooks, 1940, p. 75; Robertson and Blakeslee, 1948, p. 63.

*Type Locality.* Delaware River, near Philadelphia.

*Range.* Eastern North America from Florida to Alaska and Yukon drainage system.

**Gyraulus similis** F. C. Baker 1919, Bull. Amer. Mus. Nat. Hist., vol. 41, p. 532.

*References.* Baker, F. C., 1920, p. 68; Eyerdam, 1934, p. 48; Henderson, 1936a, p. 135; 1936b, p. 266; Brooks, 1936, p. 14; Baker, F. C., 1945, p. 75.

*Type Locality.* Smartweed Lake, East Lake near Tolland, Colorado.

*Range.* Colorado, Utah, Montana, Washington, north to Alaska.

**Gyraulus vermicularis** Gould 1847, Proc. Boston Soc. Nat. Hist., vol. 2, p. 212.

*Reference.* Dall, 1905a, p. 95.

*Type Locality.* "Interior of Oregon" (Gould).

*Range.* Northern California; Oregon; Vancouver Island, British Columbia.

#### Family ANCYLIDAE

##### Genus *Ancylus* Geoffroy 1776

**Ancylus coloradensis** Henderson 1930, Naut. 44, p. 31.

*References.* Walker, B., 1925, p. 1; Mozley, 1926, p. 56.

*Type Locality.* Eldora Lake, Boulder County, Colorado.

*Range.* Colorado; Lake Iris, alt. 4,285 feet, Jasper Park, Alberta (Mozley).

*Synonym.* *A. hendersoni* Walker 1925 *non* 1908 (Nautilus, vol. 21, p. 138).

**Ancylus singularis**, author unknown.

*Reference.* Christie, 1885, p. 339.

*Remarks.* I have been unable to find the original description of this species and suspect it was a typographical error for *A. rivularis*, now placed in the genus *Ferrissia*.

##### Genus *Ferrissia* Walker 1903

**Ferrissia borealis** Morse 1864, Jour. Portland Soc., vol. 1, p. 45.

*References.* Binney, W. G., 1865, p. 156; Lermond, 1909, p. 252; Nylander, 1914, p. 140.

*Type Locality.* Patten, Maine.

*Range.* Maine; St. John River. (Possible for St. John River drainage in New Brunswick and Quebec.)

**Ferrissia caurina** Cooper 1859, Rept. Nat. Hist. Wash., p. 378.

*Reference.* Dall, 1905a, p. 110 (*F. fragilis*).

*Type Locality.* "Black River, near Puget Sound."

*Range.* California; Puget Sound drainage; Vancouver Island, British Columbia.

**Ferrissia fragilis** Tryon 1863, Proc. Acad. Nat. Sci. Phila., 1863, p. 149.

*Reference.* Dall, 1905a, p. 110.

*Type Locality.* Laguna Honda, California.

*Range.* California. Possibly British Columbia.

*Remarks.* This species is listed here because of the confusion which exists between it and *F. caurina* Cooper, which may be a synonym. If the two are distinct, *F. fragilis* should be expunged from the Canadian list.

**Ferrissia fusca fusca** C. B. Adams 1840, Boston Jour. Nat. Hist., vol. 4, p. 329.

*References.* Baker, F. C., 1928, p. 404; Robertson and Blakeslee, 1948, p. 72.

*Type Locality.* Andover and Mansfield, Massachusetts.

*Range.* Massachusetts west to Mississippi Valley, south to New Orleans.

**Ferrissia fusca eugraptia** Pilsbry 1896, Nautilus, vol. 9, p. 139.

*References.* Letson, 1909, p. 243; Robertson and Blakeslee, 1948, p. 72.

*Type Locality.* Illinois River at Havana, Illinois.

*Range.* Illinois, Louisiana, Michigan; Niagara region (Letson).

**Ferrissia ovalis** Morse 1864, Jour. Portland Soc., vol. 1, p. 44.

*References.* Binney, W. G., 1865, p. 156; Lermond, 1909, p. 253.

*Type Locality.* Androscoggin River at Bethel, Maine.

*Range.* Androscoggin River drainage, Maine. Possible for New Brunswick and Quebec.

**Ferrissia parallela** Haldeman 1841, Mon. Limn., pt. 2, p. 3 of cover.

*References.* Dall, 1905a, p. 110; Baker, F. C., 1928, p. 395; 1939, p. 98; Robertson and Blakeslee, 1948, p. 71.

*Type Locality.* New England.

*Range.* Nova Scotia and New England west to Minnesota and Manitoba, south to Rhode Island, central New York, Ohio, Indiana, and Illinois.

**Ferrissia pumila** Sterki 1900, Ohio State Acad. Sci., 8th Ann. Rept., p. 36.

*References.* Walker, B., 1904a, p. 82; Lermond, 1909, p. 98.

*Type Locality.* Tuscarawas River near New Philadelphia, Ohio.

*Range.* Maine west to Illinois and Iowa; Ohio and New York south to Virginia.

**Ferrissia rivularis** Say 1819, Jour. Phila. Acad., vol. 1, p. 125.

*References.* Dall, 1905a, p. 110; Baker, F. C., 1928, p. 398; Robertson and Blakeslee, 1948, p. 72.

*Type Locality.* Delaware and Susquehanna rivers, Pennsylvania.

*Range.* Northern United States east of the Mississippi, New Mexico to Manitoba.

**Ferrissia shimekii** Pilsbry 1890, Nautilus, vol. 4, p. 48.

*Reference.* Baker, F. C., 1928, p. 402.

*Type Locality.* Deadman's Run, Lincoln, Nebraska.

*Range.* Nebraska; Pennsylvania; Wisconsin.

*Synonym.* *Ancylus obliquus* Shimek.

**Ferrissia tarda** Say 1830, New Harmony Dissem., Jan. 15, 1830.

*References.* Baker, F. C., 1928, p. 399; Robertson and Blakeslee, 1948, p. 72.

*Type Locality.* Wabash River, Indiana.

*Range.* Maine west to Mississippi valley, south to Illinois and Ohio, north to Michigan and Wisconsin. Southern Canada.

#### Family LANCIDAE

Genus *Lanx* Clessin 1880

**Lanx nuttallii kootaniensis** Baird 1863, Proc. Zool. Soc. London, 1863, p. 69.

*Reference.* Dall, 1905a, p. 110.

*Type Locality.* "Kootenai and Spokane Rivers."

*Range.* British Columbia, Washington, Idaho, and western Montana.

#### Family PHYSIDAE

Genus *Physa* Draparnaud 1801

**Physa ampullacea** "Gould" Binney 1865, Smiths. Misc. Coll. 143, p. 79.

*Reference.* Dall, 1905a, p. 103.

*Type Locality.* Oregon.

*Range.* Oregon, Washington, British Columbia, Alaska.

*Synonym.* *P. bullata* Gould 1855, *non* Potiez et Michaud.

**Physa ancillaria** Say 1825, Jour. Acad. Nat. Sci. Phila., vol. 5, p. 124.

*References.* Dall, 1905a, p. 102; Baker, F. C., 1928, p. 424; Robertson and Blakeslee, 1948, p. 73.

*Type Locality.* Delaware River near Easton, Pennsylvania, and Connecticut River above Hartford.

*Range.* Potomac and Ohio Rivers northward; Manitoba; Ontario.

**Physa brevispira** Lea 1864, Proc. Acad. Nat. Sci. Phila., 1864, p. 116.

*Reference.* Baker, F. C., 1928, p. 465.

*Type Locality.* Ottawa River, Ottawa, Ontario, Canada.

*Range.* Ontario west to Michigan and Wisconsin.



**Physa chetekensis** F. C. Baker 1928, Freshwater Moll. Wis., p. 440.

*Type Locality.* Moose Ear Creek, between Taber and Chetek Lakes, Barron County, Wisconsin.

*Range.* Wisconsin, Minnesota, Michigan.

**Physa elliptica elliptica** Lea 1837, Trans. Amer. Phil. Soc., vol. 5, p. 115.

*References.* Baker, F. C., 1928, p. 455; Robertson and Blakeslee, 1948, p. 77.

*Type Locality.* Not known.

*Range.* East of the Mississippi River and north of Tennessee.

**Physa elliptica aurea** Lea 1839, Trans. Amer. Phil. Soc., vol. 6, p. 18.

*Reference.* Baker, F. C., 1928, p. 458.

*Type Locality.* Hot Spring, Bath County, Virginia.

*Range.* Probably the same as that of the type form.

**Physa gyrina gyrina** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 171.

*References.* Dall, 1905a, p. 101; Baker, F. C., 1939, p. 99; Brooks and Brooks, 1940, p. 75; Robertson and Blakeslee, 1948, p. 76.

*Type Locality.* Bowyer Creek near Council Bluffs, Iowa.

*Range.* United States east of the Mississippi, Canada and northward; northwestern Ontario.

**Physa gyrina hildrethiana** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 32.

*References.* Dall, 1905a, p. 102; Baker, F. C., 1928, p. 453; Robertson and Blakeslee, 1948, p. 77.

*Type Locality.* "A lake in Illinois".

*Range.* Great Slave Lake and Port Clarence, Alaska. Western New York and Pennsylvania, to Illinois and south to Alabama. Iowa.

**Physa heterostropha** Say 1817, Nicholson's Encycl., Amer. Ed., pl. 1, fig. 6.

*References.* Dall, 1905a, p. 101; Baker, F. C., 1928, p. 447; Brooks and Brooks, 1940, p. 75; Robertson and Blakeslee, 1948, p. 76.

*Type Locality.* Delaware River, near Philadelphia, Pennsylvania.

*Range.* Potomac and Ohio Rivers north and west to the Mississippi. Newfoundland, Quebec, Ontario, and Manitoba.

**Physa integra integra** Haldeman 1841, Monogr. No. 3, p. 3 of cover.

*References.* Baker, F. C., 1928, p. 460; 1939, p. 99; Robertson and Blakeslee, 1948, p. 78.

*Type Locality.* Indiana.

*Range.* Great Lakes to the Gulf. Ontario, Michigan, New York, Ohio, Indiana, Minnesota, South Dakota, Illinois.

**Physa integra billingsii** Heron 1880, Trans. Ottawa Field-Nat. Club, vol. 1, p. 62.

*References.* Baker, F. C., 1928, p. 463; 1930, p. 194.

*Type Locality.* Billings' Bridge, Ottawa, Ontario.

*Range.* Great Lakes and St. Lawrence drainage.

**Physa jennessi** Dall 1919, Rept. Can. Arct. Exped., vol. 8, pt. A, pp. 4A, 20A.

*Type Locality.* Bernard Harbour, Northwest Territory, Canada.

*Range.* Known only from the type locality.

**Physa johnsoni** Clench 1925, Occ. Papers Mus. Zoöl. Univ. Mich., No. 168, p. 2.

*Type Locality.* Middle Spring, Hot Sulphur Springs, Banff, Alberta, Canada.

*Range.* Known only from the type locality.

**Physa latchfordi** F. C. Baker 1928, Freshwater Moll. Wis., p. 423.

*Reference.* La Rocque, 1933c, p. 134.

*Type Locality.* Meach Lake, Quebec.

*Range.* Meach Lake drainage, Quebec.

*Remarks.* Clench considers this to be identical with *P. parkeri* Currier.

**Physa lordi** Baird 1863, Proc. Zoöl. Soc. London, 1863, p. 68.

*Reference.* Dall, 1905a, p. 102.

*Type Locality.* Lake Osoyoos, British Columbia, Canada.

*Range.* British Columbia, Washington and Montana south to New Mexico and Colorado.

**Physa magnalacustris** Walker 1901, Nautilus, vol. 14, p. 97.

*Reference.* Baker, F. C., 1928, p. 435.

*Type Locality.* Frankfort, Benzie County, Michigan.

*Range.* Lakes Huron and Michigan.

**Physa michiganensis** Clench 1926, Occ. Papers Mus. Zool., Univ., Mich., No. 168, p. 4.

*Reference.* Robertson and Blakeslee, 1948, p. 78.

*Type Locality.* Stream one mile west of Geddes, Washtenaw County, Michigan.

*Range.* Michigan, Ontario (Grand River), and New York (Niagara County).

**Physa niagarensis** Lea 1864, Proc. Acad. Nat. Sci. Phila. for 1864, p. 114.

*Reference.* Letson, 1905, p. 58.

*Type Locality.* Niagara River.

*Range.* Niagara River and Onondaga Lake, New York; interglacial, Toronto, Ontario.

**Physa parkeri** (Currier) De Camp 1881, Kent Sci. Inst. Misc. Publ. 5, p. 15.

*References.* Dall, 1905a, p. 102; Clench, 1925, p. 6.

*Type Locality.* Houghton Lake, Roscommon County, Michigan.

*Range.* Michigan; Quebec, if *P. latchfordi* is a synonym.

*Remarks.* Included here because of the opinion expressed by Clench (in litt.) that *P. latchfordi* F. C. Baker is a synonym of *P. parkeri*.

**Physa propinqua** Tryon 1865, Amer. Jour. Conch., vol. 1, p. 223.

*References.* Dall, 1905a, p. 103; Henderson, 1929, p. 151.

*Type Locality.* Jordan Creek, southwest Idaho.

*Range.* Idaho to Puget Sound and south to California; lowlands of British Columbia.

**Physa sayii sayii** Tappan 1839, Amer. Jour. Sci., 1st ser., vol. 35, p. 369.

*References.* Baker, F. C., 1928, p. 430; 1939, p. 99; Robertson and Blakeslee, 1948, p. 73.

*Type Locality.* Lake Pepin, Portage County, Ohio.

*Range.* New York west to Nebraska; Ontario south to the Ohio River. Interglacial, Toronto, Ontario.

**Physa sayii crassa** Walker 1901, Nautilus, vol. 14, p. 98.

*References.* Baker, F. C., 1928, p. 434; Robertson and Blakeslee, 1948, p. 73.

*Type Locality.* Higgins Lake, Roscommon County, Michigan.

*Range.* Michigan, Wisconsin, Ontario.

**Physa sayii oneida** F. C. Baker 1919, Nautilus, vol. 33, p. 11

*Reference.* Robertson and Blakeslee, 1948, p. 76.

*Type Locality.* Oneida Lake, New York.

*Range.* Wisconsin, Indiana, Michigan, Ontario, and New York.

**Physa vinosa** Gould 1847, Proc. Boston Soc. Nat. Hist., vol. 2, p. 263.

*Reference.* Baker, F. C., 1928, p. 427.

*Type Locality.* Michipicoten, Lake Superior.

*Range.* Lake Superior region, east to Sault Ste Marie.

**Physi walkeri** Crandall 1901, Nautilus, vol. 15, p. 57.

*Reference.* Baker, F. C., 1928, p. 466.

*Type Locality.* Petoskey, Michigan.

*Range.* Michigan, Minnesota, Wisconsin, South Dakota, Illinois, Indiana, Ontario.

**Physa warreniana** Lea 1864, Proc. Acad. Nat. Sci. Phila., 1864, p. 115.

*References.* Baker, F. C., 1928, p. 437; 1939, p. 99.

*Type Locality.* Loup Fork of the Platte River, Nebraska.

*Range.* Nebraska east to Wisconsin; Ontario.

Genus *Aplexa* Fleming 1820

***Aplexa* (?) *hordacea*** Lea 1864, Proc. Acad. Nat. Sci. Phila., 1864, p. 116.

*Reference.* Dall, 1905a, p. 103.

*Type Locality.* Vancouver Island, British Columbia; Oregon.

*Range.* Oregon; Washington; British Columbia.

***Aplexa hypnorum*** Linné 1746, Fauna Suecica, Ed. 1, No. 1303.

*References.* Dall, 1905a, p. 106; Baker, F. C., 1928, p. 473; 1939, p. 99; Robertson and Blakeslee, 1948, p. 79.

*Type Locality.* Europe.

*Range.* Northern Europe, Asia and America. Northern United States and Canada.

***Aplexa hypnorum tryoni*** Currier 1867, Amer. Jour. Conch., vol. 3, p. 112.

*Reference.* Walker, B., 1892, p. 35.

*Type Locality.* Grand Rapids, Michigan.

*Range.* Lower Fort Garry, Manitoba; Lower Fraser River.

*Remarks.* The above two Canadian records rest on the identification by Clench of two lots of specimens in the National Museum of Canada (2028: Lower Fort Garry; 2297: Lower Fraser River).

## TERRESTRIAL SPECIES

## Subclass PULMONATA

## Order Stylommatophora

## Family HELICIDAE

Genus *Helix* Linné 1758

***Helix aspersa*** Müller 1774, Verm. Terr. et Fluv. Hist., vol. 2, p. 59.

*References.* Forbes, 1850, p. 53; Stearns, 1881, p. 131; Binney, W. G., 1885, p. 470; Basinger, 1931, 22 pp.; Frédéricq, 1932, pp. 25-29; Adam and Leloup, 1935, 10 pp.; Pilsbry, 1939, p. 4.

*Type Locality.* Europe.

*Range.* Europe. Introduced in the Atlantic Islands, South Africa, Australia, New Zealand, North and South America. In Canada: Nova Scotia, but the records are doubtful.

Genus *Cepaea* Held 1837

***Cepaea hortensis*** Müller 1774, Verm. Terr. et Fluv., vol. 2, p. 52.

*References.* Sheppard, 1830, p. 194; Bell, 1858, pp. 96, 97, 100, 101, 105; Latchford, 1884, p. 1052; Binney, W. G., 1885, p. 468; Hanham, 1897, p. 98; Schmitt, 1904, p. 279; Johnson, 1906, p. 73; Pilsbry, 1939, p. 6; Brooks and Brooks, 1940, p. 60; Oughton, 1948, p. 5; Robertson and Blakeslee, 1948, p. 13.

*Type Locality.* Europe.

*Range.* Europe. Introduced (perhaps not wholly, *fide* Brooks and Brooks): East coast of Canada and the United States; Labrador to Nova Scotia, Newfoundland, southwards to Nantucket, Massachusetts, Quebec.

**Cepaea nemoralis** Linné 1758, Syst. Nat., Ed. 10, p. 773.

*References.* Pilsbry, 1939, p. 9; Oughton, 1948, p. 3; Robertson and Blakeslee, 1948, p. 13.

*Type Locality.* Europe.

*Range.* Introduced: Owen Sound, Meaford, Ontario; Quebec, Anticosti, Magdalen Islands, Sable Island. Also Eastern United States.

Genus *Helicigona* Férussac 1821

**Helicigona arbustorum** Linné 1758, Syst. Nat., ed. 10, p. 771.

*References.* Dall, 1905a, p. 21; Germain, 1931, p. 226; Pilsbry, 1939, p. 11; Brooks and Brooks, 1940, p. 74.

*Type Locality.* Europe.

*Range.* Europe. Introduced: St. John's, Newfoundland.

Genus *Theba* Risso 1826

**Theba pisana** Müller 1774, Verm. Hist., vol. 2, p. 60.

*References.* Pilsbry, 1939, p. 13; Oughton, 1948, p. 5.

*Type Locality.* Europe.

*Range.* Europe. Introduced: Rosedale Ravine, Toronto, Ontario, doubtful; introduced, California.

*Remarks.* The species may have been introduced at Toronto previous to Oughton's record but was not found there by him.

Genus *Hygromia* Risso 1826

**Hygromia hispida** Linné 1758, Syst. Nat., ed. 10, p. 771.

*References.* Binney, W. G., 1885, p. 464; Pilsbry, 1939, p. 16.

*Type Locality.* Sweden.

*Range.* Europe. Introduced: Charlottetown, P.E.I.; Nova Scotia; Quebec: Quebec City, Montreal; Maine; Massachusetts.

**Hygromia striolata** C. Pfeiffer 1828, Naturgesch. Deutsch. Land u. Süßw. Moll., vol. 3, p. 28.

*References.* Whiteaves, 1862, p. 458; Binney, W. G., 1885, p. 465; Latchford, 1893c, p. 132; Hanham, 1897, p. 99; Oughton, 1938, pp. 137-140; Pilsbry, 1939, p. 18; Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 4.

*Type Locality.* Europe.

*Range.* Europe. Introduced: Newfoundland; Quebec: Quebec City, Isle d'Orleans, and Lévis; Ontario: Ottawa, Toronto; Nova Scotia; Massachusetts; Goat Island, Niagara Falls (record doubtful).

*Synonym.* *H. rufescens* Pennant.

Genus *Monacha* Fitzinger 1833

**Monacha cantiana** Montagu 1803, Testacea Britannica, p. 422.

*References.* Latchford, 1893c, p. 132; Hanham, 1897, p. 99; Ellis, 1926, p. 206; Germain, 1931, p. 263; Pilsbry, 1939, p. 20; Oughton, 1948, p. 5.

*Type Locality.* Great Britain.

*Range.* Europe. Introduced: Quebec City, Quebec; Hamilton, Ontario. An attempted introduction at Ottawa was unsuccessful (Latchford).

## Family HELMINTHOGLYPTIDAE

Genus *Monadenia* Pilsbry 1895

***Monadenia fidelis*** Gray 1834, Proc. Zoöl. Soc. London, 1834, p. 67.

*References.* Binney, W. G., 1885, p. 121; Taylor, G. W., 1889, p. 84; Dall, 1905a, p. 21; Pilsbry, 1939, p. 35.

*Type Locality.* Vancouver, Washington (Pilsbry, 1939).

*Range.* Alaska to California; Yukon; British Columbia.

## Family CAMAENIDAE

Genus *Oreohelix* Pilsbry 1904

***Oreohelix strigosa strigosa*** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 166.

*Reference.* Pilsbry, 1939, p. 419.

*Type Locality.* Columbia River Valley.

*Range.* British Columbia, Washington, Oregon, Idaho, Montana.

*Synonym.* *O. canadica* Berry.

***Oreohelix strigosa cooperi*** W. G. Binney 1858, Proc. Acad. Nat. Sci. Phila., 1858, p. 115.

*References.* Dall, 1905a, p. 52; Berry, S. S., 1922, p. 6; Pilsbry, 1939, p. 443.

*Type Locality.* Black Hills, South Dakota.

*Range.* South Dakota, Iowa, Alberta.

*Synonym.* *O. stantoni* Dall.

***Oreohelix subrudis subrudis*** "Pfeiffer" Reeve 1854, Conchol. Iconica, vol. 7, pl. 198, figs. 1390, a, b.

*Reference.* Pilsbry, 1939, p. 480.

*Type Locality.* Not specified.

*Range.* Rocky Mountain and Great Basin regions from about 32° 22' N. latitude to about 50 degrees. Southeastern British Columbia; southwestern Alberta; Idaho, Montana, Wyoming, Utah, Colorado, Arizona, and New Mexico, southward at high elevations only.

***Oreohelix subrudis apiarium*** Berry 1919, Proc. Acad. Nat. Sci. Phila., 1919, p. 199.

*Reference.* Pilsbry, 1939, p. 491.

*Type Locality.* Glacier National Park, McDonald Creek Canyon opposite Glacier Wall, Granite Park Trail, 3,550 feet, Montana.

*Range.* Montana; British Columbia.

***Oreohelix subrudis limitaris*** Dawson 1875, Rept. Brit. N. Amer. Bdy. Survey, Geol., pp. 347-350.

*References.* Dall, 1905a, p. 49; Berry, S. S., 1922, p. 4; Pilsbry, 1939, p. 490.

*Type Locality.* Waterton Lake, Alberta.

*Range.* Type locality and Rocky Mountains in Alberta; northern Idaho ?



Genus *Megomphix* H. B. Baker 1930

**Megomphix hemphilli** Binney 1879, Ann. N. Y. Acad. Sci., vol. 1, p. 356.

*References.* Binney, W. G., 1885, p. 85; Dall, 1905a, p. 35; Baker, H. B., 1930a, p. 96; 1933, p. 2; Pilsbry, 1946, p. 507.

*Type Locality.* Olympia, Thurston County, Washington.

*Range.* Washington and Oregon.

Family POLYGYRIDAE

Genus *Stenotrema* Rafinesque 1819

**Stenotrema fraterum fraterum** Say 1824, App. Long's Exped., p. 257.

*References.* Pilsbry, 1940, p. 681; Oughton, 1948, p. 9; Robertson and Blakeslee, 1948, p. 14.

*Type Locality.* Pennsylvania.

*Range.* Minnesota, Ontario, Wisconsin, Illinois, Missouri, east to New Hampshire, Vermont, Massachusetts, Rhode Island, New Jersey, Delaware, Maryland, Virginia, North Carolina, and Alabama.

*Synonym.* *Helix leaii* Ward.

**Stenotrema fraterum cavum** Pilsbry and Vanatta 1911, Nautilus, vol. 25, p. 12.

*References.* Pilsbry, 1940, p. 684; Oughton, 1948, p. 9.

*Type Locality.* Cazenovia, Madison County, New York.

*Range.* Minnesota east to New Brunswick and Maine, south to Iowa, Maryland, and Virginia.

**Stenotrema hirsutum** Say 1817, Jour. Acad. Nat. Sci. Phila., vol. 1, p. 17.

*References.* Binney, W. G., 1885, p. 279; Pilsbry, 1940, p. 662; Oughton, 1948, p. 10; Robertson and Blakeslee, 1948, p. 14.

*Type Locality.* Wissahickon Creek, Germantown, Philadelphia, Pennsylvania (Pilsbry, 1940, p. 664).

*Range.* Ontario: Point Pelee, Essex County; New York and southward. An attempted introduction at Ottawa was not successful.

**Stenotrema monodon** Rackett 1821, Trans. Linnaean Soc., vol. 13, p. 42.

*References.* Binney, W. G., 1885, p. 281; Dall, 1905a, p. 26; Pilsbry, 1940, p. 676; Oughton, 1948, p. 10; Robertson and Blakeslee, 1948, p. 14.

*Type Locality.* Alpena County, Michigan.

*Range.* Minnesota, Ontario: (Moose Factory), Quebec, and New York, southward to Missouri and Maryland.

Genus *Mesodon* Rafinesque 1819

**Mesodon clausus** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 154.

*References.* Binney, W. G., 1885, p. 316; Pilsbry, 1940, p. 712.

*Type Locality.* Illinois.

*Range.* Michigan and Minnesota. South to Alabama and Georgia.



**Mesodon elevatus** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 154.

*References.* Binney, W. G., 1885, p. 307; Pilsbry, 1940, p. 727; Oughton, 1948, p. 6.

*Type Locality.* Cincinnati, Ohio (Pilsbry 1940, p. 728).

*Range.* New York, Ohio, and Michigan, south to Alabama and Mississippi.

**Mesodon inflectus** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 153.

*References.* Binney, W. G., 1885, p. 289; Pilsbry, 1940, p. 770; Oughton, 1948, p. 6; Robertson and Blakeslee, 1948, p. 18.

*Type Locality.* "Lower Missouri."

*Range.* Michigan and Ohio, south to Florida and Louisiana. Islands in Lake Erie.

**Mesodon mitchellianus** Lea 1839, Trans. Amer. Phil. Soc., vol. 6, p. 87.

*References.* Binney, W. G., 1885, p. 306; Letson, 1909, p. 241; Pilsbry, 1940, p. 715; Oughton, 1948, p. 6; Robertson and Blakeslee, 1948, p. 15.

*Type Locality.* Ohio.

*Range.* Ontario: Fort Erie; New York: Goat Island, Niagara Falls; Pennsylvania; Ohio; Michigan; Kentucky; Indiana; Illinois.

**Mesodon pennsylvanicus** Green 1827, Contrib. Maclurian Lyceum, vol. 1, p. 8.

*References.* Binney, W. G., 1885, p. 303; Pilsbry, 1940, p. 726.

*Type Locality.* Near Chartier's Creek, Washington County, Pennsylvania.

*Range.* Michigan: Bois Blanc Island, Detroit River; Western Pennsylvania; Ohio; Indiana; Illinois; Kentucky; Virginia; Missouri.

**Mesodon sayanus** Pilsbry 1906, Proc. Acad. Nat. Sci. Phila., 1906, p. 127.

*References.* Binney, W. G., 1885, p. 319; Hanham, 1897, p. 100; Pilsbry, 1940, p. 762; Oughton, 1948, p. 7; Robertson and Blakeslee, 1948, p. 18.

*Type Locality.* "Inhabits the state of New York."

*Range.* Ontario; Quebec; Maine; New Brunswick; Vermont; Massachusetts; Rhode Island; New York; Pennsylvania; Maryland; Ohio; Michigan; Kentucky; Virginia; North Carolina; Tennessee.

**Mesodon thyroidus** Say 1816, Nicholson's Encycl., II, art. "Conchology," under *Helix albolabris*.

*References.* Bell, 1861a, p. 50; Whiteaves, 1862, p. 458; Binney, W. G., 1885, p. 314; Hanham, 1890, p. 113; Van Cleave and Foster, 1937, pp. 50-54; Pilsbry, 1940, p. 706; Oughton, 1948, p. 7; Robertson and Blakeslee, 1948, p. 15.

*Type Locality.* Near mouth of Wissahickon Creek, near Philadelphia, Pennsylvania.

*Range.* Ontario; Quebec: Cap Rouge (record doubtful), south to Texas.

*Synonym.* *Mesodon thyroidus pulchella* Cockerell 1892.

**Mesodon zaletus** Binney 1837, Jour. Boston Soc. Nat. Hist., vol. 1, p. 492.

*References.* Binney, W. G., 1885, p. 309; Pilsbry, 1940, p. 722; Oughton, 1948, p. 8; Robertson and Blakeslee, 1948, p. 18.

*Type Locality.* Cincinnati, Ohio (Pilsbry, 1940, p. 723).

*Range.* Islands in Lake Erie; Quebec: Cap Rouge, Montmorency River, Rouge River valley; Ontario: Oxley, Niagara region; south to Alabama and Arkansas.

Genus *Triodopsis* Rafinesque 1819

**Triodopsis albolabris albolabris** Say 1816, Nicholson's Encycl., vol. 2, pl. 1, fig. 1.

*References.* Bell, 1861a, pp. 46, 49; 1861b, p. 268; Binney, W. G., 1885, pp. 298, 489; Dall, 1905a, p. 26; Pilsbry, 1940, p. 835; Oughton, 1948, p. 12; Robertson and Blakeslee, 1948, p. 20.

*Type Locality.* Philadelphia, Pennsylvania.

*Range.* Manitoba east to New Brunswick; southward to Georgia and Arkansas.

**Triodopsis albolabris dentata** Tryon 1867, Amer. Jour. Conch., vol. 3, p. 39.

*References.* Letson, 1909, p. 241; Pilsbry, 1940, pp. 835, 838; Robertson and Blakeslee, 1948, p. 20.

*Type Locality.* Ohio.

*Range.* Ontario and Quebec, with the type form.

*Remarks.* A mere mutation according to Pilsbry (1940, p. 838).

**Triodopsis albolabris goodrichi** Clapp 1916, Ann. Carnegie Mus., vol. 10, p. 539.

*References.* Pilsbry, 1940, pp. 835, 839; Oughton, 1948, p. 13.

*Type Locality.* Middle Sister Island, Lake Erie, Ontario.

*Range.* Type locality and North Harbour Island, Lake Erie.

*Remarks.* A form only, according to Pilsbry (1940, p. 839).

**Triodopsis albolabris major** Binney 1837, Boston Jour. Nat. Hist., vol. 1, p. 473.

*Reference.* Pilsbry, 1940, p. 843.

*Type Locality.* Georgia.

*Range.* Georgia and Alabama. One very doubtful record for Cap Rouge, Quebec.

**Triodopsis albolabris traversensis** "Leach" Walker 1906, Ill. Cat. Moll. Mich., vol. 1, p. 465.

*References.* Hanham, 1897, p. 99; Pilsbry, 1940, pp. 835, 838; Oughton, 1948, p. 12.

*Type Locality.* Traverse City, Michigan.

*Range.* Maine, Massachusetts, New Jersey, Virginia, North Carolina, Michigan, Quebec (Hanham).

*Synonym.* *Helix maritima* Pilsbry 1890 non Draparnaud.

**Triodopsis dentifera** Binney 1837, Boston Jour. Nat. Hist., vol. 1, p. 494.

*References.* Whiteaves, 1862, p. 458; Binney, W. G., 1885, p. 312; Latchford, 1893a, p. 119; Hanham, 1897, p. 99; Pilsbry, 1940, p. 844; Oughton, 1948, p. 14; Robertson and Blakeslee, 1948, p. 20.

*Type Locality.* Eastern slope of Green Mountains, Vermont.

*Range.* Ontario, Quebec, Maine, New Hampshire, Vermont, south to West Virginia, Virginia, and South Carolina.

**Triodopsis devia** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 165.

*References.* Binney, W. G., 1885, p. 118; Taylor, G. W., 1889, p. 91; Pilsbry, 1940, p. 855.

*Type Locality.* Puget Sound.

*Range.* British Columbia south to Oregon.

**Triodopsis fraudulenta vulgata** Pilsbry 1940, Acad. Nat. Sci. Phila., Mon. 3, p. 805.

*References.* Binney, W. G., 1885, p. 292; Walker, B., 1928, p. 22; Pilsbry, 1940, p. 805; Oughton, 1948, p. 14; Robertson and Blakeslee, 1948, p. 19.

*Type Locality.* Columbus, Ohio.

*Range.* Quebec, Ontario, and Michigan, south to Missouri, Illinois, Indiana, Tennessee, Alabama, Virginia, and North Carolina.

*Synonym.* *Helix fallax* Say.

**Triodopsis germana germana** Gould 1852, U. S. Expl. Exped., Moll., p. 70.

*References.* Binney, W. G., 1885, p. 115; Taylor, G. W., 1895a, p. 60; Dall, 1905a, p. 25; Pilsbry, 1940, p. 872.

*Type Locality.* Astoria, Oregon (Pilsbry, 1940, p. 874).

*Range.* Washington and Oregon.

*Remarks.* Pilsbry places all British Columbia records of this species under the variety *vancouverinsulae*.

**Triodopsis germana vancouverinsulae** Pilsbry and Cooke 1922, Nautilus, vol. 36, p. 38.

*Reference.* Pilsbry, 1940, p. 874.

*Type Locality.* Cameron Lake, Vancouver Island, British Columbia.

*Range.* Type locality and about four miles south of Union; Stanley Park, Vancouver; Washington, Oregon.

**Triodopsis mullani olneyae** Pilsbry 1891, Nautilus, vol. 5, p. 47.

*Reference.* Pilsbry, 1940, p. 864.

*Type Locality.* Spokane, Washington.

*Range.* British Columbia south to Oregon, Idaho, and Montana.

**Triodopsis multilineata** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 150.

*References.* Bell, 1861b, p. 268; Binney, W. G., 1885, p. 303; Pilsbry, 1940, p. 847; Oughton, 1948, p. 15; Robertson and Blakeslee, 1948, p. 21.

*Type Locality.* "Illinois and Missouri."

*Range.* Ontario and Western New York to Minnesota, south to Arkansas and Mississippi. Introduced: Hull, Quebec. A previous introduction at Ottawa in 1887 was unsuccessful.

**Triodopsis notata** Deshayes 1830, *Encycl. Méthod. Hist. Nat. Vers.*, vol. 2, p. 224.

*References.* Whiteaves, 1862, p. 458; Binney, W. G., 1885, p. 285; Pilsbry, 1940, p. 824; Oughton, 1948, p. 15; Robertson and Blakeslee, 1948, p. 20.

*Type Locality.* None given.

*Range.* Ontario, east to Vermont, Massachusetts, and New Jersey, south to Alabama, and Mississippi. An attempted introduction at Ottawa was unsuccessful.

*Synonym.* *Helix palliata* Say.

**Triodopsis tridentata** Say 1816, *Nicholson's Encycl.*, ed. 1, pl. 2, fig. 1.

*References.* Bell, 1861a, p. 50; 1861b, p. 268; Binney, W. G., 1885, p. 291; Walker, B., 1928, p. 21; Pilsbry, 1940, p. 792; Oughton, 1948, p. 16; Robertson and Blakeslee, 1948, p. 19.

*Type Locality.* Philadelphia, Pennsylvania (Pilsbry, 1948, p. 796).

*Range.* Ontario and Quebec southward to Alabama and Mississippi. An attempted introduction at Ottawa was unsuccessful.

#### Genus *Allogona* Pilsbry 1939

**Allogona lombardii** A. G. Smith 1943, *Proc. Calif. Acad. Sci.*, 4th ser., vol. 23, p. 545.

*Reference.* Pilsbry, 1948, p. 1100.

*Type Locality.* Along Meadow Creek, 1.5 miles south of Selway Falls, Idaho County, Idaho.

*Range.* Type locality and other places around Selway Falls, Idaho. Doubtfully, Boswell, Kootenay Lake, British Columbia.

*Remarks.* Smith says "Approaching it in type of sculpture, but not in size, is a lot of six shells from Boswell, Kootenay Lake, British Columbia" (*Calif. Acad. Sci.* No. 27,064), "which probably should take the same name."

**Allogona profunda** Say 1821, *Jour. Acad. Nat. Sci.*, vol. 2, p. 160.

*References.* Binney, W. G., 1885, p. 318; Pilsbry, 1940, p. 877; Oughton, 1948, p. 6.

*Type Locality.* Not specified.

*Range.* Ohio, Mississippi and Missouri banks. Islands in Lake Erie. New York, Pennsylvania, Maryland, Virginia, West Virginia, Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Missouri, Kentucky, Tennessee, North Carolina, Alabama, Mississippi.

**Allogona profunda strontiana** Clapp 1916, Ann. Carnegie Mus., vol. 10, p. 537.

*References.* Pilsbry, 1940, pp. 877, 880; Oughton, 1948, p. 6.

*Type Locality.* Green (Strontian) Island, Lake Erie, Ohio.

*Range.* Type locality and North Harbour and Middle Sister Islands, Ontario and Ohio.

**Allogona ptychophora** A. D. Brown 1870, Jour. de Conchyliologie, vol. 18, p. 392.

*References.* Binney, W. G., 1885, p. 128; Dall, 1905a, p. 25; Berry, S., 1922, p. 3; Pilsbry, 1940, p. 887.

*Type Locality.* Bitter Root River, north of Ward, Montana (Pilsbry, 1940, p. 888, footnote).

*Range.* British Columbia, Idaho, Washington, Montana, and Oregon.

**Allogona townsendiana** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 99.

*References.* Binney, W. G., 1885, p. 128; Taylor, G. W., 1895a, p. 60; Dall, 1905a, p. 25; Pilsbry, 1940, p. 882.

*Type Locality.* Near junction of Willamette and Columbia rivers, Washington.

*Range.* Oregon, Washington, and British Columbia: Chilliwack Lake and Sumas Prairie.

#### Genus *Vespericola* Pilsbry 1939

**Vespericola columbiana columbiana** Lea 1838, Trans. Amer. Phil. Soc., vol. 6, p. 89.

*References.* Binney, W. G., 1885, p. 117; Pilsbry, 1940, p. 894.

*Type Locality.* Vancouver, Washington.

*Range.* Washington and Oregon.

*Synonym.* *Helix labiosa* Gould.

**Vespericola columbiana pilosa** Henderson 1928, Nautilus, vol. 41, p. 143.

*Reference.* Pilsbry, 1940, p. 896.

*Type Locality.* San Francisco, California.

*Range.* Alaska to California.

#### Family SAGDIDAE

##### Genus *Microphysula* "Cockerell" Pilsbry 1926

**Microphysula cookei** Pilsbry 1922, Nautilus, vol. 36, p. 38.

*Reference.* Pilsbry, 1940, p. 994.

*Type Locality.* Cameron Lake, Vancouver Island, British Columbia.

*Range.* British Columbia and Washington.

**Microphysula ingersolli** Bland 1874, Ann. Lyc. Nat. Hist., N. Y., vol. 11, p. 151.

*Reference.* Pilsbry, 1940, p. 991.

*Type Locality.* Howardsville, Colorado.

*Range.* British Columbia south to Oregon, east to Montana, Wyoming, Utah, Colorado, Kansas, New Mexico, and Arizona.

Family HAPLOTREMATIDAE

Genus *Haplotrema* Ancey 1881

**Haplotrema concavum concavum** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 159.

*References.* Pilsbry, 1946, p. 208; Oughton, 1948, p. 47; Robertson and Blakeslee, 1948, p. 21.

*Type Locality.* Illinois and Missouri (to "Council bluff").

*Range.* Michigan, Ontario, Quebec, and Maine, south to Mississippi and Florida.

**Haplotrema concavum minus** Ancey 1882, Le Naturaliste, vol. 2, p. 111.

*References.* Baker, H. B., 1930d, p. 412; Pilsbry, 1946, p. 210.

*Type Locality.* "Canada."

*Range.* Ontario, Quebec, Maine, Michigan, New York.

*Remarks.* The subspecies is rejected by Pilsbry (1946) and Oughton (1948). It is included here because of its wide acceptance in the past.

**Haplotrema sportella sportella** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 167.

*References.* Binney, W. G., 1885, p. 84; Dall, 1905a, p. 35; Baker, H. B., 1930d, p. 418; Pilsbry, 1946, p. 225.

*Type Locality.* Puget Sound.

*Range.* British Columbia to California.

**Haplotrema sportella hybridum** Ancey 1888, Le Naturaliste, vol. 2, p. 188.

*References.* Dall, 1905a, p. 35; Baker, H. B., 1930d, p. 420; Pilsbry, 1946, p. 227.

*Type Locality.* Riverdale (Portland suburb), Multnomah County, Oregon.

*Range.* Alaska, British Columbia, Queen Charlotte Islands, south to Oregon.

**Haplotrema vancouverense** Lea 1839, Trans. Amer. Phil. Soc., vol. 6, p. 87.

*References.* Binney, W. G., 1885, p. 82; Dall, 1905a, p. 34; Baker, H. B., 1930d, p. 416; Pilsbry, 1946, p. 221.

*Type Locality.* Fort Vancouver, Clarke County, Washington.

*Range.* Alaska, south to California, west to Idaho.

*Synonyms.* *Helix vellicata* Forbes; *Circinaria vancouverensis chocolata* Dall.



**Haplotrema voyanum** Newcomb 1865, Amer. Jour. Conch., vol. 1, p. 235.

*References.* Binney, W. G., 1885, p. 84; Dall, 1905a, p. 35; Baker, H. B., 1930d, p. 420; Pilsbry, 1946, p. 229.

*Type Locality.* Canyon Creek, Trinity County, California.

*Range.* San Diego to Puget Sound ?. California and Oregon.

*Remarks.* Henderson (1929, p. 97) quotes a letter from Pilsbry saying that it was not found in the Puget Sound region. Pilsbry (1946, p. 229) gives only California localities.

#### Family TESTACELLIDAE

##### Genus *Testacella* Cuvier 1800

**Testacella haliotide** Draparnaud 1801, Tabl. des Moll., pp. 33, 99.

*References.* Binney, W. G., 1885, p. 352; Taylor, J. W., 1900-07, p. 13; Pilsbry, 1946, p. 230.

*Type Locality.* Europe.

*Range.* Europe. Introduced, greenhouses in Nova Scotia; Pennsylvania, Illinois, California.

#### Family ZONITIDAE

##### Genus *Euconulus* Reinhardt 1883

**Euconulus chersinus chersinus** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 156.

*References.* Packard, 1867, p. 290; Baker, H. B., 1933, p. 2; Pilsbry, 1946, p. 239; Oughton, 1948, p. 16.

*Type Locality.* Sea Islands of Georgia.

*Range.* Ontario: Ottawa, Bruce Mines; Quebec: Mingan Islands; New York: Buffalo region; south to Florida and Louisiana.

**Euconulus chersinus polygyratus** Pilsbry 1899, Nautilus, vol. 12, p. 116.

*References.* Baker, H. B., 1933, p. 3; Pilsbry, 1946, p. 240; Robertson and Blakeslee, 1948, p. 22.

*Type Locality.* Not specified.

*Range.* Maine and Ontario, west to Wisconsin and Saskatchewan.

**Euconulus fulvus fulvus** Müller 1774, Verm. Hist., pt. 2, p. 56.

*References.* Bell, 1858, p. 100; Binney, W. G., 1885, p. 68; Hanham, 1890, p. 112; Taylor, G. W., 1895a, p. 59; Hanham, 1897, p. 99; Dall, 1905a, p. 41; Lermond, 1909, p. 261; Baker, H. B., 1933, p. 3; Goodrich, 1933, p. 8; Russell, L. S., 1934, p. 35; Brooks and Brooks, 1940, p. 74; Pilsbry, 1946, p. 235; Oughton, 1948, p. 18; Robertson and Blakeslee, 1948, p. 22.

*Type Locality.* Fridrichsdal, Denmark.

*Range.* Circumpolar, south to British Columbia, Alberta, Ontario, Quebec, New Brunswick, Newfoundland, Labrador, Magdalen Islands, and Anticosti.



**Euconulus fulvus alaskensis** Pilsbry 1899, Nautilus, vol. 12, p. 116.

*References.* Baker, H. B., 1933, p. 3; Pilsbry, 1946, p. 238.

*Type Locality.* Dyea Valley and Point Romanoff, Alaska.

*Range.* Alaska, Yukon, and British Columbia, south to Arizona.

**Euconulus fulvus mortoni** Jeffreys 1830, Trans. Linn. Soc., vol. 16, p. 332.

*References.* Pilsbry, 1946, p. 235; Oughton, 1948, p. 18.

*Type Locality.* Great Britain.

*Range.* Europe; Ontario (Oughton).

*Remarks.* Pilsbry does not recognize the subspecies as distinct.

#### Genus *Guppya* Mörch 1867

**Guppya sterkii** Dall 1888, Proc. U. S. Nat. Mus., vol. 11, p. 214.

*References.* Pilsbry, 1946, p. 245; Oughton, 1948, p. 20.

*Type Locality.* New Philadelphia, Ohio.

*Range.* Ontario south to Florida and Louisiana.

#### Genus *Oxychilus* Fitzinger 1833

**Oxychilus alliarius** Miller 1832, Ann. Phil., vol. 3, p. 379.

*References.* Latchford, 1904b, p. 92; Baker, H. B., 1933, p. 4; Pilsbry, 1946, p. 251.

*Type Locality.* Near Bristol, England.

*Range.* Europe. Introduced in greenhouses, Ottawa, Ontario; Victoria, British Columbia; New York, New Jersey, Colorado, and California.

**Oxychilus cellarius** Müller 1774, Verm. Hist., vol. 2, p. 28.

*References.* Hanham, 1897, p. 98; Baker, H. B., 1933, p. 4; La Rocque, 1935a, p. 34; Pilsbry, 1946, p. 249; Oughton, 1948, p. 23; Robertson and Blakeslee, 1948, p. 22.

*Type Locality.* Denmark.

*Range.* Europe. Introduced: Ontario, Quebec, New Brunswick, Nova Scotia; Oregon to California, Maine to South Carolina.

**Oxychilus draparnaldi** Beck 1837, Index Moll., p. 6.

*References.* Brooks and Brooks, 1940, p. 74; Pilsbry, 1946, p. 250; Oughton, 1948, p. 23.

*Type Locality.* Not specified.

*Range.* Europe. Introduced: Newfoundland; Ontario; United States, widespread.

*Synonym.* *Oxychilus lucidum* auctt.

#### Genus *Retinella* "Shuttleworth" Fischer 1877

**Retinella binneyana binneyana** Morse 1864, Jour. Portl. Nat. Hist. Soc., vol. 1, p. 113.

*References.* Binney, W. G., 1885, p. 180; Dall, 1905a, p. 39; Baker, H. B., 1930c, p. 198; Pilsbry, 1946, p. 259; Oughton, 1948, p. 25; Robertson and Blakeslee, 1948, p. 23.

*Type Locality.* Southern Maine.

*Range.* Maine to Michigan; Quebec, Ontario, and Manitoba, south to Pennsylvania and Ohio.

**Retinella binneyana occidentalis** H. B. Baker 1930, Proc. Acad. Nat. Sci. Phila., vol. 82, p. 198.

*Reference.* Pilsbry, 1946, p. 262.

*Type Locality.* Along McAleer Creek, just north of Seattle, Washington.

*Range.* British Columbia and Alberta south to California and Colorado.

**Retinella electrina** Gould 1841, Invert. Mass., p. 183.

*References.* Packard, 1867, p. 289; Baker, H. B., 1930c, p. 196; Brooks and Brooks, 1940, p. 74; Pilsbry, 1946, p. 256; Oughton, 1948, p. 26; Robertson and Blakeslee, 1948, p. 23.

*Type Locality.* Borders of Fresh Pond, Cambridge, Massachusetts.

*Range.* Labrador and Newfoundland south to Virginia, west to Alaska, Washington, Oregon, New Mexico, and Arizona.

*Synonym.* *Helix hammonis* auctt. non Strøm.

**Retinella indentata** Say 1822, Jour. Acad. Nat. Sci., Phila., vol. 2, p. 372.

*References.* Binney, W. G., 1885, p. 62; Hanham, 1890, p. 113; Dall, 1905a, p. 39; Baker, H. B., 1930a, p. 209; Pilsbry, 1946, p. 288; Oughton, 1948, p. 27; Robertson and Blakeslee, 1948, p. 23.

*Type Locality.* "Harrigate and New Jersey."

*Range.* Manitoba east to Maine, southward to Alabama.

**Retinella rhoadsi** Pilsbry 1899, Nautilus, vol. 12, p. 101.

*References.* Baker, H. B., 1930c, p. 207; Pilsbry, 1946, p. 286; Oughton, 1948, p. 28.

*Type Locality.* White Pond, Warren County, New Jersey.

*Range.* Maine to Michigan, southward to North Carolina. Canada: Toronto, Ontario.

**Retinella wheatleyi** Bland 1883, Ann. N. Y. Acad. Nat. Sci., vol. 2, p. 368.

*References.* Baker, H. B., 1930c, p. 204; Pilsbry, 1946, p. 272; Robertson and Blakeslee, 1948, p. 23.

*Type Locality.* The Cliffs, Knoxville, Tennessee.

*Range.* Ontario, New York, and Michigan, southward to Arkansas and Alabama.

#### Genus *Mesomphix* Rafinesque 1819

**Mesomphix cupreus** Rafinesque 1831, Enum. and Account, p. 3.

*References.* Bell, 1861b, p. 268; Binney, W. G., 1885, p. 207; Hanham, 1890, p. 111; Baker, H. B., 1933, p. 6; Pilsbry, 1946, p. 333; Oughton, 1948, p. 22; Robertson and Blakeslee, 1948, p. 26.

*Type Locality.* Kentucky.

*Range.* Ontario east to Vermont, south to Alabama and Arkansas.

*Synonym.* *Helix fuliginosa* Griffiths.

**Mesomphix inornatus** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 371.

*References.* Binney, W. G., 1885, p. 117; Taylor and Latchford 1890, p. 56; Baker, H. B., 1933, p. 7; Pilsbry, 1946, p. 307; Oughton, 1948, p. 23; Robertson and Blakeslee, 1948, p. 26.

*Type Locality.* Pennsylvania.

*Range.* Ontario and Quebec, south to Kentucky and Indiana.

#### Genus *Paravitrea* Pilsbry 1898

**Paravitrea lamellidens** Pilsbry 1898, Nautilus, vol. 11, p. 134.

*References.* Walker, B., 1900, p. 94; Baker, H. B., 1931, p. 102; 1933, p. 8; Pilsbry, 1946, p. 358; Oughton, 1948, p. 25.

*Type Locality.* Thunderhead Mountain, Blount County, Tennessee.

*Range.* Ontario: Ottawa?, Goderich; Maine; New Hampshire; New York, Tennessee, and North Carolina.

*Remarks.* Pilsbry gives only Tennessee and North Carolina, possibly because he doubts the northern records.

**Paravitrea multidentata** Binney 1840, Jour. Boston Soc. Nat. Hist., vol. 3, p. 425.

*References.* Whiteaves, 1862, p. 458; Binney, W. G., 1885, p. 183; Leslie, 1891, p. 111; Hanham, 1897, p. 99; Baker, H. B., 1931, p. 100; Pilsbry, 1946, p. 352; Oughton, 1948, p. 24; Robertson and Blakeslee, 1948, p. 27.

*Type Locality.* Eastern slopes of Green Mountains, Vermont.

*Range.* Quebec, Maine, Vermont, New York, Ontario, and New Brunswick, south to Alabama and Arkansas.

#### Genus *Pristiloma* Ancey 1887

**Pristiloma arcticum** Lehnert 1884, Science Record, vol. 2, p. 172.

*References.* Dall, 1905a, p. 45; Baker, H. B., 1931, p. 95; Pilsbry, 1946, p. 401.

*Type Locality.* Point Barrow, Alaska.

*Range.* Alaska to Washington.

*Remarks.* There are no records for British Columbia and Yukon, but its presence there is indicated by the known range.

**Pristiloma idahoense** Pilsbry 1902, Proc. Acad. Nat. Sci. Phila., vol. 54, p. 593.

*References.* Dall, 1905a, p. 44; Baker, H. B., 1931, p. 95; Pilsbry, 1946, p. 400.

*Type Locality.* Stevens Ranch, Weiser Canyon, Adams County, Idaho.

*Range.* Idaho.

**Pristiloma johnsoni** Dall 1895, Nautilus, vol. 9, p. 27.

*References.* Dall, 1905a, p. 44; Baker, H. B., 1931, p. 93; Pilsbry, 1946, p. 406.

*Type Locality.* Seattle, Washington.

*Range.* British Columbia, Washington, Oregon.

*Synonym.* *Pristiloma taylori* Pilsbry.

**Pristiloma lansingi** Bland 1875, Ann. Lyc. Nat. Hist. N. Y., vol. 11, p. 74.

*References.* Binney, W. G., 1885, p. 90; Taylor, G. W., 1889, p. 89; 1895a, p. 59; Dall, 1905a, p. 44; Baker, H. B., 1931, p. 94; Pilsbry, 1946, p. 403.

*Type Locality.* Astoria, Clatsop County, Oregon.

*Range.* British Columbia, Washington, Oregon, California.

**Pristiloma pilsbryi** Vanatta 1899, Proc. Acad. Nat. Sci. Phila., 1899, p. 120.

*References.* Dall, 1905a, p. 44; Baker, H. B., 1931, p. 97; Pilsbry, 1946, p. 398.

*Type Locality.* Portland, Multnomah County, Oregon.

*Range.* Oregon, Washington.

**Pristiloma stearnsi** Bland 1875, Ann. Lyc. Nat. Hist. N.Y., vol. 11, p. 76.

*References.* Binney, W. G., 1885, p. 92; Taylor, G. W., 1889, p. 89; 1895a, p. 59; Dall, 1905a, p. 44; Baker, H. B., 1931, p. 96; Pilsbry, 1946, p. 396.

*Type Locality.* Astoria, Clatsop County, Oregon.

*Range.* Alaska, British Columbia, Washington, Oregon.

#### Genus *Hawaiia* Gude 1911

**Hawaiia minuscula** Binney 1840, Boston Jour. Nat. Hist., vol. 3, p. 435.

*References.* Binney, W. G., 1885, p. 63; Dall, 1905a, p. 43; Brooks and Brooks, 1940, p. 74; Pilsbry, 1946, p. 420; Oughton, 1948, p. 22; Robertson and Blakeslee, 1948, p. 27.

*Type Locality.* Ohio (Pilsbry, 1946, p. 423, footnote).

*Range.* Alaska and Northwest Territories south to British Columbia, east to Newfoundland, Quebec, and Maine, south to Florida and Texas.

#### Genus *Ventridens* W. G. Binney 1863

**Ventridens demissus** Binney 1843, Jour. Boston Soc. Nat. Hist., vol. 4, p. 361.

*References.* Binney, W. G., 1885, p. 207; Baker, H. B., 1933, p. 12; Pilsbry, 1946, p. 459.

*Type Locality.* Western Pennsylvania.

*Range.* Pennsylvania west to Michigan and Illinois, south to Alabama and Mississippi.

**Ventridens gularis** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 156.

*References.* Dall, 1905a, p. 43; Baker, H. B., 1933, p. 11; Pilsbry, 1946, p. 443.

*Type Locality.* Allegheny County, Pennsylvania.

*Range.* Recorded in error for Lake Superior, Winnipeg, and Saskatchewan River by Sowerby. Pennsylvania west to Indiana, south to Tennessee, Alabama, and Georgia.

*Remarks.* It may yet turn up in southern Ontario, although Oughton (1948) did not find it.

**Ventridens intertextus** Binney 1840, Jour. Boston Soc. Nat. Hist., vol. 3, p. 413.

*References.* Pilsbry, 1946, p. 468; Oughton, 1948, p. 21; Robertson and Blakeslee, 1948, p. 28.

*Type Locality.* Cabarrus County, North Carolina.

*Range.* Ontario and New York south to Texas and Louisiana.

**Ventridens ligera** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 157.

*References.* Pilsbry, 1946, p. 465; Oughton, 1948, p. 21; Robertson and Blakeslee, 1948, p. 28.

*Type Locality.* Missouri.

*Range.* Ontario and New York south to Florida, Arkansas, and Oklahoma.

*Remarks.* The Toronto record (Robertson, 1913) has not been confirmed. The species was introduced at Ottawa by Latchford but did not survive.

**Ventridens suppressus** Say 1829, New Harmony Disseminator, vol. 2, p. 229.

*References.* Pilsbry, 1946, p. 438; Oughton, 1948, p. 21; Robertson and Blakeslee, 1948, p. 27.

*Type Locality.* Germantown, Pennsylvania.

*Range.* Ontario, New York, and Pennsylvania, south to Florida and west to Ohio and Michigan.

#### Genus *Zonitoides* Lehmann 1862

**Zonitoides arboreus** Say 1816, Nicholson's Encycl., 1st Amer. Ed., pl. 4, fig. 4.

*References.* Binney, W. G., 1885, pp. 19, 23, 30-32, 35, 57, 61, 65, 179, 201-03, 356, 388, 478; Dall, 1905a, p. 42; Baker, F. C. and Cahn, 1931, p. 62; Baker, H. B., 1933, p. 13; Brooks and Brooks, 1940, p. 74; Pilsbry, 1946, p. 480; Oughton, 1948, p. 31; Robertson and Blakeslee, 1948, p. 29.

*Type Locality.* Probably Philadelphia.

*Range.* Labrador and Newfoundland to British Columbia and the Northwest Territories, southward to Mexico and Central America. "All of the states except Nevada" (Pilsbry).

**Zonitoides nitidus** Müller 1774, Verm. Terr. et Fluv. Hist., vol. 2, p. 32.

*References.* Binney, W. G., 1885, p. 60; Schmitt, 1904, p. 279; Baker, H. B., 1933, p. 13; Brooks and Brooks, 1940, p. 74; Pilsbry, 1948, p. 476; Oughton, 1948, p. 32; Robertson and Blakeslee, 1948, p. 28.

*Type Locality.* Fridrichsberg, Denmark.

*Range.* Alaska and Northwest Territories of Canada east to Ontario and Quebec, south to Washington, Idaho, Montana, Utah, South Dakota, Minnesota, Illinois, Indiana, Tennessee, Arkansas, and Maryland.

Genus *Striatura* Morse 1864

**Striatura exigua** Stimpson 1850, Proc. Boston Soc. Nat. Hist., vol. 3, p. 175.

*References.* Binney, W. G., 1885, p. 182; Baker, H. B., 1933, p. 10; Brooks and Brooks, 1940, p. 74; Pilsbry, 1946, p. 490; Oughton, 1948, p. 28; Robertson and Blakeslee, 1948, p. 29.

*Type Locality.* Vicinity of Boston, Massachusetts.

*Range.* Manitoba east to Newfoundland, Nova Scotia, and Prince Edward Island south to New Jersey, Pennsylvania, Ohio, Michigan, and Minnesota.

**Striatura ferrea** Morse 1864, Jour. Portland Soc. Nat. Hist., vol. 1, p. 17.

*References.* Binney, W. G., 1885, p. 181; Baker, H. B., 1933, p. 10; Pilsbry, 1946, p. 497; Oughton, 1948, p. 29; Robertson and Blakeslee, 1948, p. 30.

*Type Locality.* Maine.

*Range.* Nova Scotia west to Ontario; south to North Carolina, West Virginia, and Tennessee.

**Striatura milium** Morse 1859, Proc. Boston Soc. Nat. Hist., vol. 7, p. 28.

*References.* Binney, W. G., 1885, p. 66; Dall, 1905a, p. 43; Baker, H. B., 1933, p. 10; Brooks and Brooks, 1940, p. 74; Pilsbry, 1946, p. 495; Oughton, 1948, p. 29; Robertson and Blakeslee, 1948, p. 29.

*Type Locality.* Maine.

*Range.* Manitoba, Ontario, Quebec, Newfoundland, and Prince Edward Island, south to New Jersey, West Virginia, Kentucky, and Indiana.

**Striatura pugetensis** Dall 1895, Nautilus, vol. 8, p. 130.

*References.* Dall, 1905a, p. 43; Pilsbry, 1946, p. 492.

*Type Locality.* Seattle, Washington.

*Range.* British Columbia to California.

Genus *Vitrina* Draparnaud 1801

**Vitrina alaskana** Dall 1905, Harriman-Alaska Exped., vol. 13, p. 37.

*References.* Binney, W. G., 1885, p. 88; Baker, H. B., 1933, p. 4; Pilsbry, 1946, p. 503.

*Type Locality.* Carson Valley, Nevada.

*Range.* Alaska to California, west to Montana, South Dakota, Wyoming, Colorado, and New Mexico.

*Synonym.* *V. pfeifferi* Newcomb *non* Deshayes.

**Vitrina limpida** Gould 1850, Agassiz, Lake Superior, p. 243.

*References.* Binney, W. G., 1885, p. 177; Whiteaves, 1905b, p. 66; Dall, 1905a, p. 37; Mozley, 1928a, p. 15; Baker, H. B., 1933, p. 3; Brooks and Brooks, 1940, p. 74; Pilsbry, 1946, p. 501; Oughton, 1948, p. 30; Robertson and Blakeslee, 1948, p. 30.



*Type Locality.* Cape Gourgonne, Nipigon Bay, Ontario.

*Range.* Newfoundland and Labrador south to Pennsylvania and Michigan, west to Alberta.

*Synonym.* *V. pellucida* De Kay, *non* Müller.

**Vitrina pellucida angelicae** Beck 1837, p. 1.

*References.* Binney, W. G., 1885, p. 178; Dall, 1905a, p. 36; Pilsbry, 1946, p. 504.

*Type Locality.* Greenland.

*Range.* Greenland. Doubtfully, Mingan Islands, Quebec, Newfoundland, and Labrador.

#### Family LIMACIDAE

#### Genus *Limax* Linné 1758

**Limax flavus** Linné 1758, Syst. Nat., ed. 10, p. 652.

*References.* Binney, W. G., 1885, p. 452; Ellis, 1926, p. 262; Germain, 1931, p. 98; Pilsbry, 1948, p. 528; Robertson and Blakeslee, 1948, p. 41.

*Type Locality.* Europe.

*Range.* Europe. Introduced: Maine, Massachusetts, New York, Pennsylvania, Michigan, Illinois, Indiana, Maryland, Virginia, Georgia, South Carolina, California, Texas, and many other states (see Pilsbry, 1948). Quebec (record doubtful).

**Limax marginatus** Müller 1774, Verm. Terr. et Fluv. Hist., vol. 2, p. 10.

*References.* Brooks and Brooks, 1940, p. 59; Pilsbry, 1948, p. 529.

*Type Locality.* Europe.

*Range.* Europe. Introduced: Newfoundland; Virginia; Missouri; Colorado; California.

*Synonym.* *Limax arborum* auctt.

**Limax maximus** Linné 1758, Syst. Nat., ed. 10, vol. 1, p. 652.

*References.* Binney, W. G., 1885, p. 450; 1890, p. 217; Taylor, J. W., 1900-07, pp. 34-52; Simpson, G. B., 1901, pp. 239-314; Baker, F. C., 1902, p. 195; Bartsch, 1904, p. 12; Latchford, 1904b, p. 92; Cockerell, 1911, p. 60; Ellis, 1926, p. 259; Germain, 1931, p. 91; Gambetta, 1932, pp. 1-18; Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 45; Pilsbry, 1948, p. 524; Robertson and Blakeslee, 1948, p. 41.

*Type Locality.* Sweden.

*Range.* Europe. Introduced: Ontario: Ottawa, Toronto; Newfoundland; Maine, Massachusetts, Michigan, and many other states; British Columbia.

#### Genus *Deroceras* Rafinesque 1820

**Deroceras hyperboreum** Westerlund 1877, Sibir. Land och Söttv. Moll., p. 21.

*References.* Taylor, G. W., 1889, p. 87; 1895a, p. 59; Dall, 1905a, p. 45; Henderson, 1929, p. 107; Oughton, 1940, p. 130; 1941, pp. 30-31; Pilsbry, 1948, p. 543.

*Type Locality.* Siberia.



*Range.* Bernard Harbour, Northwest Territories, Alberta?, British Columbia, Manitoba, Ungava, Labrador; circumboreal.

*Remarks.* Probably a synonym of *Deroceras laeve* Müller, according to Pilsbry (1948).

**Deroceras laeve** Müller 1774, Verm. Terr. et Fluv. Hist., vol. 2, p. 1.

*References.* Binney, W. G., 1885, p. 237; Taylor and Latchford, 1890, p. 56; Leslie, 1891, p. 112; Hanham, 1897, p. 98; Baker, H. B., 1930b, pp. 41-42; Goodrich, 1932, p. 41; Brooks and Brooks, 1940, p. 74; Oughton, 1940, p. 130; 1941, pp. 30-31; Pilsbry, 1948, p. 539; Robertson and Blakeslee, 1948, p. 42; Ord and Watts, 1949, p. 5.

*Type Locality.* Denmark.

*Range.* "North America generally, from the Arctic to middle Florida and Central America, the southern limit not determined." (Pilsbry, 1948, p. 540).

*Synonyms.* *Limax campestris* Binney; *L. berendti* Strebel.

**Deroceras reticulatum** Müller 1774, Verm. Terr. et Fluv. Hist., vol. 2, p. 10.

*References.* Packard, 1867, p. 289; Binney, W. G., 1885, pp. 453, 454; Taylor, G. W., 1889, p. 97; Taylor and Latchford, 1890, p. 56; Leslie, 1891, vol. 1, p. 112; Taylor, G. W., 1895a, p. 59; Hanham, 1897, p. 98; Dall, 1905a, p. 45; Luther, A., 1915, 40 pp.; Goodrich, 1932, p. 41; 1933, p. 9; Oughton, 1948, p. 43; Pilsbry, 1948, p. 534; Robertson and Blakeslee, 1948, p. 42; Ord and Watts, 1949, p. 3.

*Type Locality.* Gardens of Rosenburg and Fridrichsdal, Denmark.

*Range.* British Columbia to Labrador and Ungava, Newfoundland, Prince Edward Island, and Nova Scotia.

*Remarks.* Most of our records of *D. agreste* are based on *D. reticulatum* (Müller), a species which it resembles closely. Luther (1915) has pointed out the differences between the two species, and Oughton (1948) has placed all the Ontario records under *D. reticulatum*. Other records of *D. agreste* for Canada have been transferred to *D. reticulatum* also, following Pilsbry (1948).

#### Genus *Milax* Gray 1855

**Milax gagates** Draparnaud 1801, Tableau Moll. France, p. 100.

*References.* Binney, W. G., 1885, p. 88; Taylor, J. W., 1900-07, p. 139; Dall, 1905a, p. 46; Henderson, 1929, p. 107; Germain, 1931, p. 107; Pilsbry, 1948, p. 563.

*Type Locality.* Europe, probably France.

*Range.* Europe. Introduced: California, Oregon, Washington, Idaho, Colorado, Pennsylvania, Virginia, and probably British Columbia.

*Synonym.* *Limax hewstoni* Binney.

## Family ENDODONTIDAE

Genus *Anguispira* Morse 1864

***Anguispira alternata*** Say 1816, Nicholson's *Encycl.*, 1st Amer. Ed., vol. 2, p. 8.

*References.* Sheppard, 1830, p. 268; Bell, 1858, pp. 100, 107; 1861a, p. 50; 1861b, p. 268; Binney, W. G., 1865, p. 256; 1885, p. 255; Hanham, 1890, p. 112; 1897, p. 99; Baker, F. C., 1904, pp. 661-668; Letson, 1909, p. 240; Jones, D. T., 1933, p. 243-250; Blake, 1935, pp. 58-59; MacMillan, 1940, p. 380; Pilsbry, 1948, p. 568; Oughton, 1948, p. 33; Robertson and Blakeslee, 1948, p. 30.

*Type Locality.* Middle States.

*Range.* Nova Scotia to Minnesota south to Comal County, Texas.

***Anguispira alternata eriensis*** Clapp 1916, *Ann. Carnegie Mus.*, vol. 10, p. 535.

*References.* MacMillan, 1940, p. 384; 1941, p. 23; Oughton, 1948, p. 34; Pilsbry, 1948, p. 572.

*Type Locality.* Middle Sister Island, Lake Erie, Ontario.

*Range.* Middle Sister, Green, East Sister, Hen, Pelee, and North Harbour Islands, Lake Erie. Maine, Quebec, Illinois, Kansas, Massachusetts, Michigan, New York, Ohio, Pennsylvania, Ontario. Texas?.

***Anguispira alternata fergusoni*** Bland 1861, *Ann. Lyc. Nat. Hist. of N. Y.*, vol. 7, p. 421.

*References.* Oughton, 1948, p. 34; Pilsbry, 1948, p. 575.

*Type Locality.* Helderberg Mountains, New York.

*Range.* Hastings and Welland counties, Ontario. New York, New Jersey, Pennsylvania, Virginia, North and South Carolina.

***Anguispira kochi kochi*** Pfeiffer 1845, *Proc. Zool. Soc. London*, 1845, p. 127.

*References.* MacMillan, 1940, p. 394; Pilsbry, 1948, p. 591; Oughton, 1948, p. 35.

*Type Locality.* Cincinnati, Ohio (Pilsbry, 1948, p. 592).

*Range.* Western Pennsylvania and central Mississippi valley to Louisiana west to California and north to southwestern British Columbia. Alberta?.

*Remarks.* Introduced at Ottawa by Latchford, but all died.

*Synonym.* *Helix solitaria* Say.

***Anguispira kochi mynesites*** Clapp 1916, *Ann. Carnegie Mus.*, vol. 10, p. 535.

*References.* MacMillan, 1940, p. 397; Pilsbry, 1948, p. 593.

*Type Locality.* Mouse Island, Lake Erie, Ohio.

*Range.* Type locality and Ballast Island, Lake Erie.

**Anguispira kochi roseoapicata** Clapp 1916, Ann. Carnegie Mus., vol. 10, p. 534.

*References.* MacMillan, 1940, p. 396; Pilsbry, 1948, p. 594.

*Type Locality.* North Harbour Island, Lake Erie, Ontario.

*Range.* Type locality and other islands in Lake Erie.

**Anguispira kochi strontiana** Clapp 1916, Ann. Carnegie Mus., vol. 10, p. 533.

*References.* MacMillan, 1940, p. 396; Pilsbry, 1948, p. 594.

*Type Locality.* Green (Strontian) Island, Lake Erie, Ohio.

*Range.* Type locality and Middle Sister (Ontario) and Starve Islands (Ohio), Lake Erie.

#### Genus *Discus* Fitzinger 1833

**Discus cronkhitei cronkhitei** Newcomb 1865, Proc. Calif. Acad. Nat. Sci., vol. 3, p. 180.

*References.* Bell, 1858, pp. 100, 101, 108; Binney, W. G., 1885, p. 70; Taylor, G. W., 1889, p. 89; Taylor and Latchford, 1890, p. 99; Taylor, G. W., 1895a, p. 59; Dall, 1905a, p. 50; Letson, 1909, p. 240; Nylander, 1914, p. 141; Berry, S. S., 1922, p. 7; Whittaker, 1924, p. 10; Brooks and Brooks, 1940, p. 74; MacMillan, 1940, p. 406; Oughton, 1948, p. 36; Pilsbry, 1948, p. 600.

*Type Locality.* Klamath Valley, Oregon.

*Range.* Newfoundland and Alaska, south to California, Arizona, New Mexico, and Texas.

*Synonym.* *Helix striatella* Anthony.

**Discus cronkhitei anthonyi** Pilsbry 1906, Proc. Acad. Nat. Sci. Phila., 1906, p. 153.

*References.* Walker, B., 1907, p. 180; Lermond, 1909, p. 259; Baker, F. C. and Cahn, 1931, p. 62; Richards, 1932, p. 33; Goodrich, 1933, p. 8; Brooks and Brooks, 1940, p. 74; MacMillan, 1940, p. 406; Pilsbry, 1948, p. 604; Robertson and Blakeslee, 1948, p. 31.

*Type Locality.* Near Strawberry Mansion, Fairmont Park, Philadelphia, Pennsylvania.

*Range.* Newfoundland and New Brunswick to British Columbia, south to California and east to Florida.

**Discus cronkhitei catskillensis** Pilsbry 1894, Man. Conch., vol. 9, p. 48.

*References.* Pilsbry, 1898, p. 86; MacMillan, 1940, p. 407; Pilsbry, 1948, p. 605.

*Type Locality.* Tannersville Valley, Catskill Mountains, New York.

*Range.* New England, New York, Ontario, and New Jersey to Wisconsin and Minnesota.

**Discus patulus** Deshayes 1830, Encycl. Méth., vol. 2, p. 217.

*References.* Binney, W. G., 1885, p. 260; Hanham, 1890, p. 112; Letson, 1909, p. 241; MacMillan, 1940, p. 399; Oughton, 1948, p. 38; Pilsbry, 1948, p. 608; Robertson and Blakeslee, 1948, p. 31.

*Type Locality.* Environs of New York.

*Range.* Ontario, New York, Minnesota to Texas, east to the Atlantic. Introduced at Ottawa (Latchford) but did not survive.

*Synonym.* *Helix perspectiva* Say.

**Discus rotundatus** Müller 1774, Verm. Terr. et Fluv. Hist., vol. 2, p. 29.

*References.* MacMillan, 1940, p. 412; Pilsbry, 1948, p. 616.

*Type Locality.* Germany?

*Range.* Europe. Introduced, Newfoundland and Massachusetts.

**Discus shimekii** Pilsbry 1890, Nautilus, vol. 4, p. 3; Proc. Acad. Nat. Sci. Phila., vol. 42, p. 297.

*References.* MacMillan, 1940, p. 408; Oughton, 1948, p. 38; Pilsbry, 1948, p. 617.

*Type Locality.* Loess formation, Iowa City, Iowa.

*Range.* Yukon, Alberta, and Ontario south to Oregon and Arizona.

**Discus shimekii cockerellii** Pilsbry 1898, Nautilus, vol. 12, p. 85.

*References.* Dall, 1905a, p. 43; MacMillan, 1940, p. 409; Pilsbry, 1948, p. 619.

*Type Locality.* Saguache County, Colorado.

*Range.* California, Arizona, and New Mexico, north to Alaska.

*Synonym.* *Zonitoides randolphi* Pilsbry.

#### Genus *Helicodiscus* Morse 1864

**Helicodiscus parallelus** Say 1821, Proc. Acad. Nat. Sci. Phila., vol. 2, p. 164.

*References.* Binney, W. G., 1885, p. 75; Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 39; Pilsbry, 1948, p. 625; Robertson and Blakeslee, 1948, p. 34.

*Type Locality.* Council Bluff, Iowa (Pilsbry, 1948, p. 627).

*Range.* Manitoba east to Newfoundland, Prince Edward Island, New Brunswick, and Maine, south to Arkansas.

#### Genus *Punctum* Morse 1864

**Punctum conspectum** Bland 1865, Ann. N. Y. Lyc. Nat. Hist., vol. 7, p. 163.

*References.* Binney, W. G., 1885, p. 87; Taylor, G. W., 1889, p. 88; 1895a, p. 59; 1899, p. 202; Dall, 1905a, p. 53; Henderson, 1929, p. 116; Pilsbry, 1948, p. 651.

*Type Locality.* San Francisco, California.

*Range.* Alaska, British Columbia, and Idaho, south to California and New Mexico.

**Punctum minutissimum** Lea 1841, Trans. Amer. Phil. Soc., vol. 9, p. 17.

*References.* Binney, W. G., 1885, p. 71; Taylor, G. W., 1889, p. 90; 1895a, p. 59; Dall, 1905a, p. 53; Berry, S. S., 1922, p. 15; Baker, H. B., 1930b, p. 5; Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 39; Pilsbry, 1948, p. 644; Robertson and Blakeslee, 1948, p. 34.

*Type Locality.* Ohio, vicinity of Cincinnati.

*Range.* Newfoundland, Prince Edward Island, Quebec, and Ontario, southward to Alabama and Florida.

*Synonym.* *P. pygmaeum* auctt. non Draparnaud.

**Punctum randolphi** Dall 1895, Nautilus, vol. 8, p. 130.

*References.* Dall, 1905a, p. 53; Henderson, 1929, p. 117; Pilsbry, 1948, p. 646.

*Type Locality.* Seattle, Washington.

*Range.* British Columbia, Washington, Oregon, and Idaho.

#### Family ARIONIDAE

##### Genus *Arion* Férussac 1821

**Arion ater** Linné 1746, Fauna Suecica, p. 365.

*References.* Ellis, 1926, p. 181; Germain, 1931, p. 73; Brooks and Brooks, 1940, p. 60; Pilsbry, 1948, p. 668.

*Type Locality.* Europe.

*Range.* Europe. Introduced: Newfoundland, Quebec, Maine, Michigan, British Columbia, Oregon.

**Arion circumscriptus** Johnston 1828, Edinb. New Philos. Jour., vol. 5, p. 76.

*References.* Taylor, J. W., 1900-07, p. 227; Cockerell, 1904, p. 91; Lermont, 1909, p. 259; Ellis, 1926, p. 176; Germain, 1931, p. 81; Goodrich, 1932, p. 42; Brooks and Brooks, 1940, p. 60; Oughton, 1948, p. 46; Pilsbry, 1948, p. 673; Robertson and Blakeslee, 1948, p. 41; Ord and Watts, 1949, p. 8.

*Type Locality.* Not specified.

*Range.* Europe. Introduced: Newfoundland, Prince Edward Island, Nova Scotia, Quebec, Ontario, Maine, New York, Massachusetts, Pennsylvania, Michigan, Indiana, Wisconsin, British Columbia, California.

**Arion hortensis** Férussac 1819, Hist. Nat. Moll. terr. et fluv., vol. 2, p. 65.

*References.* Taylor, J. W., 1900-07, p. 210; Germain, 1931, p. 77; Brooks and Brooks, 1940, p. 60; Oughton, 1948, p. 46; Pilsbry, 1948, p. 671; Ord and Watts, 1949, p. 10.

*Type Locality.* Europe, probably France.

*Range.* Introduced: Newfoundland, Nova Scotia, Quebec, Ontario, Pennsylvania, Washington, California.

**Arion subfuscus** Draparnaud 1805, Hist. Moll. France, p. 125.

*References.* Brooks and Brooks, 1940, p. 60; Pilsbry, 1948, p. 670; Ord and Watts, 1949, p. 12.

*Type Locality.* Europe, probably France.

*Range.* Introduced: Newfoundland, Nova Scotia, Quebec, Massachusetts, New York, Pennsylvania.

Genus *Prophysaon* Bland and Binney 1873

**Prophysaon andersoni andersoni** J. G. Cooper 1872, Proc. Acad. Nat. Sci. Phila., 1872, p. 148.

*References.* Binney, W. G., 1885, p. 98; Taylor, W. G., 1889, p. 90; Binney, W. G., 1890, p. 205; 1892, p. 179; Taylor, G. W., 1895a, p. 59; Dall, 1905a, p. 46; Henderson, 1929, p. 111; Pilsbry, 1948, p. 682.

*Type Locality.* Oakland, California.

*Range.* California to Alaska eastward to Idaho.

*Synonym.* *P. hemphilli*.

**Prophysaon andersoni pacificum** Cockerell 1890, Nautilus, vol. 3, p. 111.

*References.* Taylor, G. W., 1895a, p. 59; Dall, 1905a, p. 46; Pilsbry, 1948, p. 687.

*Type Locality.* Victoria, Vancouver Island, British Columbia.

*Range.* Known only from the type locality.

**Prophysaon andersoni pallidum** Cockerell 1891, Nautilus, vol. 5, p. 31.

*References.* Dall, 1905a, p. 46; Pilsbry, 1948, p. 687.

*Type Locality.* British Columbia.

*Range.* British Columbia, Alaska.

**Prophysaon coeruleum** Cockerell 1890, Nautilus, vol. 3, p. 112.

*References.* Dall, 1905a, p. 47; Pilsbry, 1948, p. 691.

*Type Locality.* Olympia, Washington.

*Range.* Oregon, Washington.

**Prophysaon dubium** Cockerell 1890, Nautilus, vol. 3, p. 112.

*Reference.* Pilsbry, 1948, p. 694.

*Type Locality.* Olympia, Washington.

*Range.* Oregon, Washington.

**Prophysaon foliolatum** Gould 1852, Moll. U. S. Exped., p. 2.

*References.* Dall, 1905a, p. 47; Pilsbry, 1948, p. 688.

*Type Locality.* Near Discovery Harbor, Washington.

*Range.* Washington: Puget Sound region.

**Prophysaon humile** Cockerell 1890, Nautilus, vol. 3, pp. 112-113.

*References.* Dall, 1905a, p. 47; Pilsbry, 1948, p. 699.

*Type Locality.* Woods around Lake Cœur d'Alene, Idaho.

*Range.* Idaho.

**Prophysaon vanattae** Pilsbry 1948, Land Moll. of N. Amer., Acad. Nat. Sci. Phila., Mon. 3, vol. 2, pt. 2, p. 697.

*Type Locality.* Seattle, Washington.

*Range.* Washington and Oregon.



Genus *Ariolimax* Mörch 1860

***Ariolimax columbianus*** Gould 1851, Terr. Moll., vol. 2, p. 43.

*References.* Binney, W. G., 1885, p. 98; Taylor, G. W., 1889, p. 90; 1895a, p. 59; Dall, 1905a, p. 47; Pilsbry, 1948, p. 716.

*Type Locality.* "Nisqually . . . and Discovery Harbor, Puget Sound . . ."

*Range.* British Columbia to California.

***Ariolimax columbianus forma maculata*** Cockerell 1891, Nautilus, vol. 5, p. 31.

*References.* Dall, 1905a, p. 48; Pilsbry, 1948, p. 718.

*Type Locality.* Not specified.

*Range.* Vancouver Island, British Columbia.

***Ariolimax columbianus forma niger*** Cockerell 1891, Nautilus, vol. 5, p. 32.

*Reference.* Pilsbry, 1948, p. 718.

*Type Locality.* British Columbia.

*Range.* British Columbia.

***Ariolimax columbianus forma typica*** Cockerell 1891, Nautilus, vol. 5, p. 31.

*Reference.* Pilsbry, 1948, p. 718.

*Type Locality.* British Columbia.

*Range.* British Columbia.

***Ariolimax steindachneri*** Babor 1900, Annalen K. K. Nat. Hof-museums, vol. 15, p. 95.

*References.* Dall, 1905a, p. 48; Pilsbry, 1948, p. 721.

*Type Locality.* Puget Sound.

*Range.* Known only from the type locality.

Genus *Hemphillia* Bland and Binney 1872

***Hemphillia camelus*** Pilsbry and Vanatta 1897, Nautilus, vol. 11, p. 44.

*References.* Dall, 1905a, p. 49; Pilsbry, 1948, p. 742.

*Type Locality.* Old Mission, Idaho.

*Range.* Alberta; Idaho.

***Hemphillia glandulosa*** Bland and Binney 1873, Ann. Lyc. Nat. Hist. N. Y., vol. 10, p. 209.

*References.* Binney, W. G., 1885, p. 111; Taylor, G. W., 1900, p. 150; Hanham, 1926, p. 143; Pilsbry, 1948, p. 739.

*Type Locality.* Astoria, Oregon.

*Range.* Oregon; Washington; British Columbia.



**Hemphillia malonei** Pilsbry 1917, Nautilus, vol. 30, p. 117.

*References.* Hanham, 1926, p. 143; Pilsbry, 1948, p. 745.

*Type Locality.* Tawney's Hotel, on Salmon River, 12 miles from Mount Hood, Oregon.

*Range.* Oregon; Washington; British Columbia.

*Remarks.* "A doubtful species probably identical with *H. camelus*, though the locality is remote" (Pilsbry, 1948, p. 746).

#### Family PHILOMYCIDAE

##### Genus *Philomycus* Rafinesque 1820

**Philomycus caroliniensis flexuolaris** Rafinesque 1820, Annals of Nature, p. 10.

*References.* Wyman, 1844, pp. 410-415; Binney, W. G., 1885, p. 242; Baker, F. C., 1902, p. 201; Oughton, 1948, p. 42; Pilsbry, 1948, p. 756; Robertson and Blakeslee, 1948, p. 42.

*Type Locality.* Catskill Mountains.

*Range.* Ontario, east to Maine, south to Texas and Louisiana.

*Remarks.* The typical form is not found in Canada. See Pilsbry (1948, p. 756) for the distinctions between the two forms of this species.

##### Genus *Pallifera* Morse 1864

**Pallifera dorsalis** Binney 1842, Boston Jour. Nat. Hist., vol. 4, p. 174.

*References.* Binney, W. G., 1885, p. 245; Campbell, 1906, p. 25; Oughton, 1948, p. 40; Pilsbry, 1948, p. 760; Robertson and Blakeslee, 1948, p. 43.

*Type Locality.* "Vermont and Massachusetts."

*Range.* Vermont, Massachusetts, Ontario, Quebec, Nova Scotia, and New York, south to Ohio and Virginia.

#### Family SUCCINEIDAE

##### Genus *Oxyloma* Westerlund 1885

**Oxyloma decampii decampii** Tryon 1866, Amer. Jour. Conch. vol. 2, p. 237.

*References.* Binney, W. G., 1885, p. 338; Pilsbry, 1948, p. 779.

*Type Locality.* Marshall, Calhoun County, Michigan.

*Range.* Michigan; reported from Toronto, Ontario, and elsewhere.

**Oxyloma decampii gouldi** Pilsbry 1948, Land Moll. N. Amer., vol. 2, p. 782.

*Type Locality.* None given.

*Range.* Prince Edward Island and Nova Scotia west to Ontario, south to Maryland, west to Colorado and Montana.

**Oxyloma decampii peoriensis** Wolf, *in* Walker, 1894, Nautilus, vol. 7, p. 127.

*References.* Letson, 1909, p. 242; Brooks and Brooks, 1940, p. 74; Pilsbry, 1948, p. 784; Robertson and Blakeslee, 1948, p. 49.

*Type Locality.* Peoria, Illinois.

*Range.* Newfoundland, Ontario, New York, Michigan, Illinois.

**Oxyloma grønlandica** (Beck) Möller 1842, Index Moll. Grönl., p. 4.

*References.* Binney, W. G., 1885, p. 197; Dall, 1905a, p. 57; Brooks and Brooks, 1940, p. 74; Pilsbry, 1948, p. 776.

*Type Locality.* Greenland.

*Range.* Greenland, Iceland, Newfoundland.

**Oxyloma hawkinsi** Baird 1863, Proc. Zoöl. Soc. London, 1863, p. 68.

*References.* Binney, W. G., 1885, p. 128; Dall, 1905a, p. 57; Whiteaves, 1906b, p. 118; Pilsbry, 1948, p. 798.

*Type Locality.* Lake Osoyoos, British Columbia.

*Range.* Alaska, British Columbia, Manitoba.

**Oxyloma haydeni** Binney 1858, Proc. Acad. Nat. Sci. Phila., vol. 10, p. 114.

*References.* Binney, W. G., 1885, p. 196; Hanham, 1899, p. 3; Goodrich, 1933, p. 9; Pilsbry, 1948, p. 797.

*Type Locality.* Nebraska, between the rivers Loup Fork and L'Eau qui Court.

*Range.* Great Slave Lake to Manitoba and Nebraska.

*Remarks.* The variety *minor* Binney, described at the same time as the type form, is not recognized by Pilsbry.

**Oxyloma nuttalliana** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 32.

*References.* Binney, W. G., 1885, p. 159; Taylor, G. W., 1889, p. 93; Dall, 1905a, p. 58; Pilsbry, 1948, p. 794.

*Type Locality.* Portland, Oregon (Pilsbry, 1948, p. 794).

*Range.* Alaska to California.

*Remarks.* The Yukon record is doubted by Dall who thinks it was based on a specimen of *Succinea retusa* Lea, but see Pilsbry's (1948, p. 795) remarks on Dall's concept of *S. retusa* and *S. nuttalliana*.

**Oxyloma retusa** Lea 1837, Trans. Amer. Phil. Soc., vol. 5, p. 117.

*References.* Dall, 1905a, p. 56; Oughton, 1948, p. 76; Pilsbry, 1948, p. 785; Robertson and Blakeslee, 1948, p. 48.

*Type Locality.* Near Cincinnati, Ohio.

*Range.* Yukon? and British Columbia? east to Labrador and Maine.

*Synonyms.* *Succinea ovalis* Gould *non* Say; *S. higginsi* Bland.

*Remarks.* The Yukon and British Columbia records are based on Dall's identifications. The species is no doubt found in Canada, but its western limit, according to Pilsbry's (1948, p. 786) data, would be east of the Rocky Mountains.

**Oxyloma verrilli** Bland 1865, Ann. N. Y. Lyc., vol. 8, p. 169.

*References.* Latchford, 1884, p. 1052; Binney, W. G., 1885, p. 197; Dall, 1905a, p. 57; Brooks and Brooks, 1940, p. 74; Pilsbry, 1948, p. 777.

*Type Locality.* Salt Lake, Anticosti Island, Quebec.

*Range.* Newfoundland, Magdalen Islands, Mingan Islands, and Anticosti, Quebec.

Genus *Succinea* Draparnaud 1801

**Succinea aurea** Lea 1846, Trans. Amer. Philos. Soc., vol. 9, p. 4.

*References.* Pilsbry, 1948, p. 815; Robertson and Blakeslee, 1948, p. 48.

*Type Locality.* Ohio.

*Range.* Ontario east to Maine, south to South Carolina, Ohio, and Indiana.

**Succinea avara avara** Say 1824, App. Long's Exped., p. 260.

*References.* Binney, W. G., 1885, pp. 31, 36, 59, 337, 339, 497; Dall, 1905a, p. 57; Berry, S. S., 1922, p. 16; Baker, F. C. and Cahn, 1931, p. 62; Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 74; Pilsbry, 1948, p. 837; Robertson and Blakeslee, 1948, p. 47.

*Type Locality.* Northwest Territory.

*Range.* Mackenzie District south to Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, and Newfoundland, and southward to Florida and New Mexico.

**Succinea avara vermeta** Say 1829, New Harmony Disseminator, vol. 2, No. 15.

*References.* Bell, 1858, pp. 100, 101; Whiteaves, 1905g, p. 3; Pilsbry, 1948, p. 839.

*Type Locality.* Near New Harmony, Indiana.

*Range.* Sporadically, within the range of the species. Recorded from Alberta, Manitoba, Ontario, Quebec, and southward.

*Remarks.* Pilsbry (1948, p. 839) does not recognize this as a subspecies; he calls it a form, "the full development of the species in humid places." It is noted here because of its wide acceptance in the literature as a species or variety.

**Succinea bayardi** Vanatta 1914, Proc. Acad. Nat. Sci. Phila., vol. 66, p. 222.

*Reference.* Pilsbry, 1948, p. 814.

*Type Locality.* Salt marsh just above the water, along Indian River, Kensington, Prince Edward Island.

*Range.* Prince Edward Island.

**Succinea strigata** Pfeiffer 1855, Proc. Zool. Soc. London for 1854, p. 297.

*References.* Russell, L. S., 1934, p. 35; Pilsbry, 1948, p. 810.

*Type Locality.* Port Clarence, Alaska.

*Range.* Yukon, Alaska, Mackenzie Valley, Saskatchewan; Greenland to Behring Straits.

*Synonym.* *Succinea chrysis* Westerlund.

**Succinea grosvenori** Lea 1864, Proc. Acad. Nat. Sci., Phila., 1864, p. 109.

*References.* Hanham, 1899, p. 3; Dall, 1905a, p. 57; Walker, E. M., 1917, p. 169; Russell, L. S., 1934, p. 35; Oughton, 1948, p. 75; Pilsbry, 1948, p. 819.

*Type Locality.* Not specified—"Santa Rita valley, Kansas? . . . and Alexandria, Louisiana."

*Range.* Northwest Territories (Great Slave Lake), Alberta, Saskatchewan, Manitoba, Ontario, southward to Florida and Arizona.

*Synonym.* *Succinea lineata* W. G. Binney 1857.

**Succinea oregonensis** Lea 1841, Proc. Amer. Phil. Soc., vol. 2, p. 32.

*References.* Binney, W. G., 1885, p. 160; Taylor, G. W., 1889, p. 93; Dall, 1905a, p. 56; Pilsbry, 1948, p. 842.

*Type Locality.* Oregon.

*Range.* British Columbia? to California; Manitoba?

*Remarks.* Pilsbry (1948, p. 842) doubts all records except the original and adds: "The species of Lea has not been collected again so far as is known."

**Succinea ovalis ovalis** Say 1817, Jour. Acad. Nat. Sci. Phila., vol. 1, p. 15.

*References.* Bell, 1858, p. 101; Packard, 1863, p. 424; Binney, W. G., 1885, p. 341; Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 75; Pilsbry, 1948, p. 801; Robertson and Blakeslee, 1948, p. 49.

*Type Locality.* Philadelphia, Pennsylvania.

*Range.* Newfoundland and James Bay to North Dakota and Nebraska, south to Alabama.

*Synonyms.* *Succinea obliqua* Say; *S. totteniana* Lea 1841.

**Succinea ovalis optima** Pilsbry 1908, Proc. Acad. Nat. Sci. Phila., p. 48.

*References.* Pilsbry, 1948, p. 805; Robertson and Blakeslee, 1948, p. 49.

*Type Locality.* Cruger's Valley, near Upper Red Hook, Dutchess County, New York.

*Range.* Ontario (Niagara Glen), New York to Minnesota, south to Kentucky.

**Succinea rusticana** Gould 1846, Proc. Boston Soc. Nat. Hist., vol. 2, p. 187.

*References.* Binney, W. G., 1885, p. 159; Taylor, G. W., 1889, p. 93; Dall, 1905a, p. 58; Pilsbry, 1948, p. 824.

*Type Locality.* Blue Lake, Grand Coulee, Oregon.

*Range.* British Columbia to California.

## Family STROBILOPSIDAE

Genus *Strobilops* Pilsbry 1893

**Strobilops aenea** Pilsbry 1926, Nautilus, vol. 40, p. 69.

*References.* Pilsbry, 1927, p. 29; Walker, B., 1928, p. 157; Oughton 1948, p. 65; Pilsbry, 1948, p. 862.

*Type Locality.* Cazenovia, New York.

*Range.* Southern Ontario and Massachusetts to Michigan, Illinois, Arkansas, south to southern Florida and Louisiana.

**Strobilops affinis** Pilsbry, 1892, Proc. Acad. Nat. Sci. Phila., 1892, p. 404.

*References.* Pilsbry, 1927, p. 27; Walker, B., 1928, p. 159; Mozley, 1928a, p. 14; Oughton, 1948, p. 66; Pilsbry, 1948, p. 860.

*Type Locality.* Not specified—"New York, Ohio, etc."

*Range.* Manitoba east to Maine, south to Kansas, New Jersey, Alabama, and Oklahoma.

**Strobilops labyrinthica labyrinthica** Say 1817, Jour. Acad. Nat. Sci. Phila., vol. 1, p. 124.

*References.* Bell, 1858, p. 100; 1861b, p. 268; Binney, W. G., 1885, p. 264; Dall, 1905a, p. 27; Pilsbry, 1927, p. 20; Oughton, 1948, p. 66; Pilsbry, 1948, p. 854; Robertson and Blakeslee, 1948, p. 43.

*Type Locality.* Philadelphia, Pennsylvania.

*Range.* Manitoba, east to New Brunswick and Maine; south to Georgia and Alabama.

**Strobilops labyrinthica parietalis** Pilsbry 1927, Man. Conch., vol. 28, p. 24.

*References.* Walker, B., 1928, p. 157; Pilsbry, 1948, p. 856.

*Type Locality.* Ardsley, Montgomery County, Pennsylvania.

*Range.* Sporadic, within the range of the type form.

*Remarks.* A form only, according to Pilsbry (1948, p. 856).

**Strobilops virgo** Pilsbry 1892, Nautilus, vol. 6, p. 94.

*References.* Walker, B., 1928, p. 156; Pilsbry, 1948, p. 855.

*Type Locality.* Sebec Lake, Piscataquis County, Maine.

*Range.* Maine to Minnesota and Iowa; Arkansas?

*Remarks.* Pilsbry (1948, p. 855) considers this to be of not higher rank than a variety.

## Family PUPILLIDAE

Genus *Gastrocopta* Wollaston 1878

**Gastrocopta armifera** Say 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 162.

*References.* Whiteaves, 1862, p. 458; Binney, W. G., 1885, p. 326; Hanham, 1890, p. 114; 1897, p. 101; Dall, 1905a, p. 27; Oughton, 1948, p. 50; Pilsbry, 1948, p. 874; Robertson and Blakeslee, 1948, p. 35.

*Type Locality.* Germantown, Philadelphia, Pennsylvania (Pilsbry, 1948).

*Range.* Alberta, Manitoba, Ontario, Quebec, and southward to New Mexico and Texas.

**Gastrocopta armifera affinis** Sterki 1909, Nautilus, vol. 23, p. 53.

*Reference.* Pilsbry, 1948, p. 877.

*Type Locality.* Fairport, Ohio ?

*Range.* Northern Ohio, Michigan, Wisconsin, Indiana, Minnesota, and Kansas.

**Gastrocopta armifera similis** Sterki 1909, Nautilus, vol. 23, p. 53.

*Reference.* Pilsbry, 1948, p. 877.

*Type Locality.* Rose Hill, Ontario.

*Range.* Northern New York to Iowa, Minnesota, Ontario.

**Gastrocopta contracta** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 374.

*References.* Whiteaves, 1862, p. 458; Binney, W. G., 1885, p. 458; Hanham, 1890, p. 114; Taylor and Latchford, 1890, p. 52; Dall, 1905a, p. 27; Lermond, 1909, p. 258; Letson, 1909, p. 241; Oughton, 1948, p. 50; Pilsbry, 1948, p. 880; Robertson and Blakeslee, 1948, p. 35.

*Type Locality.* Occoquan, Virginia.

*Range.* Maine, Quebec, Ontario, Manitoba, south to Florida and Mexico.

**Gastrocopta corticaria** Say 1816, Nicholson's Encycl., ed. 1, pl. 4, fig. 5.

*References.* Binney, W. G., 1885, p. 330; Hanham, 1890, p. 114; Lermond, 1909, p. 258; Oughton, 1948, p. 50; Pilsbry, 1948, p. 894.

*Type Locality.* Philadelphia, Pennsylvania.

*Range.* Ontario, Maine, and New Brunswick, south to Florida and Louisiana.

**Gastrocopta holzingeri** Sterki 1889, Nautilus, vol. 3, p. 37.

*References.* Taylor, G. W., 1893b, p. 51; Baker, F. C., 1902, pp. 236-237; Dall, 1905a, p. 28; Letson, 1909, p. 242; Mozley, 1928a, p. 14; Oughton, 1948, p. 51; Pilsbry, 1948, p. 883; Robertson and Blakeslee, 1948, p. 35.

*Type Locality.* Will County, Illinois.

*Range.* Ontario and western New York to Montana, south to Illinois, Kansas, and New Mexico.

**Gastrocopta pentodon** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 371.

*References.* Oughton, 1948, p. 52; Pilsbry, 1948, p. 886; Robertson and Blakeslee, 1948, p. 35.

*Type Locality.* Pennsylvania.

*Range.* Prince Edward Island, Ontario, Quebec, Maine, Manitoba, and British Columbia, south to Mexico.

*Synonym.* *Pupa curvidens* Gould 1841.

**Gastrocopta procera** Gould 1840, Boston Jour. Nat. Hist., vol. 3, p. 401.

*References.* Pilsbry, 1948, p. 907; Robertson and Blakeslee, 1948, p. 36.

*Type Locality.* Baltimore, Maryland.

*Range.* Eastern United States, Maryland to South Carolina, west to Kansas and Oklahoma, south to Alabama and eastern Texas; Ontario.



**Gastrocopta tappaniana** C. B. Adams 1842, Thompson's Hist. of Vermont, p. 158.

*References.* Oughton, 1948, p. 53; Pilsbry, 1948, p. 889; Robertson and Blakeslee, 1948, p. 36.

*Type Locality.* Vermont.

*Range.* Ontario and Maine to Virginia and Alabama, west to South Dakota, Kansas, and Arizona.

#### Genus *Pupoides* Pfeiffer 1854

**Pupoides albilabris** C. B. Adams, 1841 Amer. Jour. Sci., vol. 40, p. 271.

*References.* Binney, W. G., 1885, p. 325; Hanham, 1890, p. 114; Vanatta, 1915, p. 95; Oughton, 1948, p. 54; Pilsbry, 1948, p. 921; Robertson and Blakeslee, 1948, p. 40.

*Type Locality.* Upper Missouri.

*Range.* Ontario, Quebec, and Maine, south to northern Mexico.

*Synonyms.* *Pupa fallax* auctt., *Pupa marginata* Say.

#### Genus *Pupilla* Leach 1831

**Pupilla blandi** Morse 1865, Ann. N. Y. Lyc. Nat. Hist., vol. 8, p. 211.

*References.* Binney, W. G., 1885, p. 188; Dall, 1905a, p. 28; Pilsbry, 1948, p. 929.

*Type Locality.* Fort Berthold, North Dakota.

*Range.* Alberta and Montana, south to New Mexico and Nevada.

**Pupilla muscorum** Linné 1758, Syst. Nat., ed. 10, p. 767.

*References.* Latchford, 1884, p. 1052; Binney, W. G., 1885, p. 78; Dall, 1905a, p. 29; Ellis, 1926, p. 156; Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 54; Pilsbry, 1948, p. 933; Robertson and Blakeslee, 1948, p. 40.

*Type Locality.* Sweden.

*Range.* British Columbia east to Newfoundland and Maine; Alaska south and east to New Mexico, Arizona, Vermont, New Hampshire, Maine, and New Jersey. Europe.

#### Genus *Vertigo* Müller 1774

**Vertigo alpestris** Alder 1838, Trans. Nat. Hist. Soc. Northumberland, vol. 2, p. 340.

*References.* Pilsbry, 1919, p. 197; Brooks and Brooks, 1940, p. 74; Pilsbry, 1948, p. 968.

*Type Locality.* Great Britain.

*Range.* Great Britain; Europe. Introduced?, Newfoundland.



**Vertigo alpestris oughtoni** Pilsbry 1948, Man. Land Moll. N. Amer., vol. 2, pt. 2, p. 968.

*References.* Pilsbry and Cooke, 1918-20, p. 197; Oughton, 1940, pp. 128, 129; 1948, p. 55; Pilsbry, 1948, p. 968.

*Type Locality.* Baffin Island at Lake Harbour.

*Range.* Europe. Baffin Island; Quebec: Anticosti Island (doubtful); Ontario: Fort Severn, Hudson Bay.

**Vertigo arctica** Wallenberg 1858, Malak. Blätter, vol. 5, pp. 32, 99.

*References.* Dall, 1905a, p. 32; Pilsbry and Cooke, 1918-20, p. 189; Oughton, 1940, p. 128; Pilsbry, 1948, p. 992.

*Type Locality.* Lapland.

*Range.* Lake Harbour, Baffin Island; Alaska; Lapland, Northern Scandinavia; Siberia.

*Remarks.* Possibly a synonym of *V. modesta* Say (Oughton).

**Vertigo arthuri** Martens 1882, Sitzungsber. Ges. Nat. Freunde Berlin, No. 9, p. 140.

*References.* Pilsbry and Cooke, 1918-20, p. 121; Oughton, 1948, p. 56; Pilsbry, 1948, p. 977.

*Type Locality.* Little Missouri, Dakota.

*Range.* North Dakota. Doubtfully, Winnipeg, Manitoba.

*Remarks.* This may be a synonym of *Vertigo coloradensis basidens* Pilsbry and Vanatta. Pilsbry (1948) records it only from the type locality, but points out that it comes from a poorly studied region, a remark which also applies to southern Manitoba.

**Vertigo binneyana** Sterki 1890, Proc. Acad. Nat. Sci. Phila., 1890, p. 33.

*References.* Dall, 1905a, p. 31; Pilsbry and Cooke, 1918-20, p. 90; Oughton, 1948, p. 56; Pilsbry, 1948, p. 955.

*Type Locality.* Helena, Montana.

*Range.* Ontario, Manitoba, British Columbia, Montana, Iowa, New Mexico.

**Vertigo bollesiana** Morse 1865, Ann. Lyc. Nat. Hist. N. Y., vol. 8, p. 209.

*References.* Binney, W. G., 1885, p. 191; Hanham, 1897, p. 101; Pilsbry and Cooke, 1918-20, p. 101; Oughton, 1948, p. 56; Pilsbry, 1948, p. 981; Robertson and Blakeslee, 1948, p. 37.

*Type Locality.* Orono, Maine.

*Range.* Quebec, Maine, Ontario, Massachusetts, New Hampshire, New York; doubtfully, Indiana, Michigan, and south to Virginia and eastern Tennessee.

**Vertigo columbiana** Sterki 1900, Proc. Acad. Nat. Sci. Phila., 1900, p. 602.

*References.* Dall, 1905a, p. 30; Pilsbry and Cooke, 1918-20, p. 108; Pilsbry, 1948, p. 959.

*Type Locality.* Vancouver Island, British Columbia.

*Range.* Alaska south to Oregon.

**Vertigo elatior** Sterki 1894, Land and Fresh Water Moll. New Philadelphia, p. 5.

*References.* Dall, 1905a, p. 31; Pilsbry and Cooke, 1918-20, p. 95; Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 64; Pilsbry, 1948, p. 956; Robertson and Blakeslee, 1948, p. 37.

*Type Locality.* New Philadelphia, Ohio.

*Range.* Newfoundland west to British Columbia, south to New Mexico.

*Synonym.* *V. gouldii lagganensis* Pilsbry.

**Vertigo gouldii gouldii** Binney 1843, Proc. Boston Soc. Nat. Hist., vol. 1, p. 205.

*References.* Latchford, 1884, p. 1052; Binney, W. G., 1885, p. 190; Hanham, 1897, p. 101; Dall, 1905a, p. 30; Pilsbry and Cooke, 1918-20, p. 98; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 58; Pilsbry, 1948, p. 971; Robertson and Blakeslee, 1948, p. 37.

*Type Locality.* Brookline, Massachusetts.

*Range.* Newfoundland, Prince Edward Island, Quebec, Ontario, New Brunswick, and Maine, south to Kentucky, Tennessee, and northern Alabama.

**Vertigo gouldii basidens** Pilsbry and Vanatta 1900, Proc. Acad. Nat. Sci. Phila., 1900, p. 604.

*References.* Pilsbry and Cooke, 1918-20, p. 117; Pilsbry, 1948, p. 975.

*Type Locality.* Bland, Bernalillo County, New Mexico.

*Range.* New Mexico, Colorado, Montana, British Columbia.

**Vertigo gouldii coloradensis** Cockerell 1891, Brit. Nat., 1891, p. 100.

*References.* Pilsbry and Cooke, 1918-20, p. 115; Pilsbry, 1948, p. 974.

*Type Locality.* Near Swift Creek, Custer County, Colorado.

*Range.* Colorado, Utah, Arizona. Doubtfully, Newfoundland.

**Vertigo gouldii cristata** Sterki 1919 in Pilsbry, H. A. and Cooke, C. M., 1918-20, Man. Conch., 2nd ser., vol. 25, p. 100.

*References.* Oughton, 1948, p. 58; Pilsbry, 1948, p. 973.

*Type Locality.* Quebec City, Quebec, Canada.

*Range.* Type locality and Ontario (Oughton).

**Vertigo gouldii paradoxa** Sterki 1900, Nautilus, vol. 13, p. 103.

*References.* Brooks and Brooks, 1940, p. 74; Oughton, 1948, p. 58; Pilsbry, 1948, p. 972.

*Type Locality.* Woodland, Aroostook County, Maine.

*Range.* Newfoundland, Quebec, and Ontario; Maine and Michigan.

**Vertigo milium** Gould 1840, Boston Jour. Nat. Hist., vol. 3, p. 402.

*References.* Binney, W. G., 1885, p. 333; Hanham, 1897, p. 101; Dall, 1905a, p. 32; Pilsbry and Cooke, 1918-20, p. 146; Oughton, 1948, p. 59; Pilsbry, 1948, p. 944; Robertson and Blakeslee, 1948, p. 37.

*Type Locality.* Oak Island, Chelsea, near Boston, Massachusetts.

*Range.* Ontario, Quebec, Maine, and Massachusetts, southwestward to Florida and Mexico.

**Vertigo modesta** Say 1824, Long's 2nd Exped., vol. 2, Appendix, p. 259.

*References.* Dall, 1905a, p. 29; Whiteaves, 1905f, p. 171; Pilsbry, and Cooke, 1918-20, p. 123; Oughton, 1940, p. 129; 1948, p. 60; Brooks and Brooks, 1940, p. 74; Pilsbry, 1948, p. 982.

*Type Locality.* "Northwest Territory . . . somewhere near or west of the western end of Lake Superior" (Pilsbry, 1948, p. 983).

*Range.* Labrador and Newfoundland to British Columbia and Alaska. Baffin Island (Oughton). Locally, Maine, Vermont, and Connecticut; loess of Iowa, Missouri, and Kansas.

*Remarks.* The form *castanea* Sterki (Pilsbry, 1948, p. 990) and the variety *parietalis* Ancey (Pilsbry, 1948, p. 986) are recorded by Vanatta for Newfoundland, but Pilsbry makes no mention of either record.

*Synonym.* *Pupa decora* Gould 1848.

**Vertigo modesta corpulenta** Morse 1865, Ann. N. Y. Lyc. Nat. Hist., vol. 8, p. 210.

*References.* Taylor, G. W., 1889, p. 92; 1895a, p. 60; Pilsbry, 1948, p. 985.

*Type Locality.* Little Valley, Washoe County, Nevada.

*Range.* Vancouver Island, British Columbia, south to Nevada and California.

**Vertigo modesta hoppii** Möller 1842, Index. Moll. Grönl., p. 4.

*References.* Latchford, 1884, p. 1052; Binney, W. G., 1885, p. 189; Schmitt, 1904, p. 279; Dall, 1905a, p. 29; Pilsbry and Cooke, 1918-20, p. 135; Pilsbry, 1948, p. 990.

*Type Locality.* Greenland.

*Range.* Greenland. Doubtfully, Ungava and Labrador.

*Remarks.* The Alberta and Anticosti records are erroneous, as pointed out by Dall and Pilsbry and Cooke.

**Vertigo morsei** Sterki 1894, Nautilus, vol. 8, p. 89.

*References.* Pilsbry and Cooke, 1918-20, p. 81; Oughton, 1948, p. 61; Pilsbry, 1948, p. 952.

*Type Locality.* Joliet, Illinois.

*Range.* New York and New Jersey to Ontario, Michigan, Indiana, and Illinois.

**Vertigo nylanderi** Sterki 1909, Nautilus, vol. 22, p. 107.

*References.* Pilsbry and Cooke, 1918-20, p. 100; Oughton, 1948, p. 61; Pilsbry, 1948, p. 970.

*Type Locality.* Woodland, Aroostook County, Maine.

*Range.* Type locality and Ontario (Oughton).

**Vertigo ovata** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 375.

*References.* Binney, W. G., 1885, p. 334; Hanham, 1897, p. 101; Dall, 1905a, p. 32; Whiteaves, 1905g, p. 3; Pilsbry and Cooke, 1918-20, p. 83; Oughton, 1948, p. 61; Pilsbry, 1948, p. 952; Robertson and Blakeslee, 1948, p. 36.

*Type Locality.* Philadelphia, Pennsylvania.

*Range.* Labrador west to British Columbia, north to Alaska; south to Florida, Mexico, and the West Indies.

**Vertigo perryi** Sterki 1905, Nautilus, vol. 19, p. 53.

*References.* Brooks and Brooks, 1940, p. 74; Pilsbry, 1948, p. 966.

*Type Locality.* Warwick, Rhode Island.

*Range.* Rhode Island, Massachusetts (Pilsbry). Newfoundland (Brooks and Brooks).

**Vertigo pygmaea** Draparnaud 1801, Tableau, p. 57.

*References.* Dall, 1905a, p. 33; Pilsbry and Cooke, 1918-20, p. 96; Goodrich, 1933, p. 8; Oughton, 1948, p. 62; Pilsbry, 1948, p. 961; Robertson and Blakeslee, 1948, p. 37.

*Type Locality.* Europe.

*Range.* Nova Scotia, Quebec, and Ontario; Maine to Virginia and west to Ohio. Europe.

**Vertigo tridentata** Wolf 1870, Amer. Jour. Conch., vol. 5, p. 198.

*References.* Pilsbry and Cooke, 1918-20, p. 106; Oughton, 1948, p. 63; Pilsbry, 1948, p. 965.

*Type Locality.* Canton, Illinois.

*Range.* Quebec and Maine west to Ontario and Minnesota; south to New Jersey, Pennsylvania, West Virginia, Ohio, Indiana, and Texas.

**Vertigo ventricosa** Morse 1865, Ann. N. Y. Lyc. Nat. Hist., vol. 8, p. 207.

*References.* Binney, W. G., 1885, p. 192; Hanham, 1897, p. 101; Dall, 1905a, p. 31; Whiteaves, 1905b, p. 171; Pilsbry and Cooke, 1918-20, p. 94; Goodrich, 1933, p. 9; Oughton, 1948, p. 63; Pilsbry, 1948, p. 957.

*Type Locality.* Not specified.

*Range.* Prince Edward Island west to Ontario, south to Missouri, Illinois, Ohio, and New York.

#### Genus *Columella* Westerlund 1878

**Columella alticola** Ingersoll 1875, U. S. Geol. Surv. Terr. Bull. 1, p. 128.

*References.* Berry, S. S., 1922, p. 14; Oughton, 1948, p. 48; Pilsbry, 1948, p. 1003.

*Type Locality.* "Camp 26, Cunningham Gulch; Camp F; Rio La Plata." Possibly Howardsville, Colorado, given by Pilsbry (1948).

*Range.* British Columbia and Alberta south to New Mexico and Arizona. Baffin Island; Ontario (Oughton).

**Columella edentula** Draparnaud 1805, Hist. Moll., p. 59.

*References.* Binney, W. G., 1885, p. 192; Taylor, G. W., 1889, pp. 92-93; Taylor and Latchford, 1890, pp. 52, 57; Taylor, G. W., 1895a, p. 60; Hanham, 1897, p. 101; Dall, 1905a, p. 54; Mozley, 1928a, p. 14; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 48; Pilsbry, 1948, p. 1002; Robertson and Blakeslee, 1948, p. 40.

*Type Locality.* Not specified.

*Range.* Newfoundland, Labrador, Quebec, Ontario, Manitoba, British Columbia, south to New Jersey, Pennsylvania, Iowa, Montana, and Oregon.

*Synonym.* *Pupa simplex* Gould.

## Family VALLONIIDAE

Genus *Vallonia* Risso 1826

***Vallonia albula*** Sterki 1893, Proc. Acad. Nat. Sci. Phila., 1893, p. 263.

*References.* Dall, 1905a, p. 23; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 68; Pilsbry, 1948, p. 1031.

*Type Locality.* "St. Joseph, Quebec, Canada."

*Range.* Newfoundland, Quebec, Ontario, Manitoba, and Vancouver Island, British Columbia, southward to California, New Mexico, and Massachusetts.

***Vallonia asiatica*** Nevill 1877, Sci. Res. 2nd Yarkand Mission, p. 4.

*References.* Sterki, 1893a, p. 260; Dall, 1905, p. 23.

*Type Locality.* Wakhan, Central Asia.

*Range.* Asia; Alaska.

***Vallonia costata*** Müller 1774, Verm. Terr., vol. 2, p. 31.

*References.* Latchford, 1884, p. 1052; Sterki, 1893a, p. 259; Hanham, 1897, p. 101; Dall, 1905a, p. 23; Mozley, 1928a, p. 14; Oughton, 1948, p. 68; Pilsbry, 1948, p. 1026; Robertson and Blakeslee, 1948, p. 46.

*Type Locality.* Fridrichsdal, Denmark.

*Range.* Alberta east to Quebec, Maine, and New York, south to Virginia, Ohio, and Illinois.

*Remarks.* As pointed out by Dall (1905), the range of this species is confused. Pilsbry gives no Alberta records.

***Vallonia excentrica*** Sterki 1893, Proc. Acad. Nat. Sci. Phila., vol. 45, p. 252.

*References.* Hanham, 1897, p. 101; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 70; Pilsbry, 1948, p. 1025; Robertson and Blakeslee, 1948, p. 46.

*Type Locality.* Not specified.

*Range.* Ontario east to Newfoundland, Maine, and Nova Scotia, southward to Maryland, Ohio, Indiana, Illinois, and Oregon. Europe.

***Vallonia gracilicosta*** Reinhardt 1883, Sitzungsber, Ges. Naturfr. Berlin, 1883, No. 3, p. 42.

*References.* Sterki, 1893a, p. 269; Dall, 1905a, p. 23; Oughton, 1948, p. 69; Pilsbry, 1948, p. 1028.

*Type Locality.* Little Missouri River, North Dakota.

*Range.* Alberta, Manitoba, and Ontario, south to Texas and Arizona.

***Vallonia parvula*** Sterki 1893, Proc. Acad. Nat. Sci. Phila., vol. 45, p. 265.

*References.* Oughton, 1948, p. 69; Pilsbry, 1948, p. 1027.

*Type Locality.* Joliet, Illinois.

*Range.* Ontario to Manitoba, south to Texas.

**Vallonia perspectiva** Sterki 1892, Man. Conch., vol. 8, p. 257.

*References.* Sterki, 1893a, p. 271; Walker, E. M., 1917, p. 163; Pilsbry, 1948, p. 1033.

*Type Locality.* "Knoxville, Tennessee; Jackson County, Alabama; Iowa."

*Range.* Minnesota, New York, Ontario, and North Dakota, south to Mexico.

**Vallonia pulchella** Müller 1774, Verm. Terr., vol. 2, p. 30.

*References.* Bell, 1858, p. 100; Binney, W. G., 1885, p. 78; Sterki, 1893a, p. 246; Hanham, 1897, p. 101; Dall, 1905a, p. 22; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 70; Pilsbry, 1948, p. 1023; Robertson and Blakeslee, 1948, p. 46.

*Type Locality.* Denmark.

*Range.* Manitoba east to Prince Edward Island, New Brunswick, Newfoundland, and Nova Scotia, south to Missouri and Kentucky.

#### Genus *Planogyra* Morse 1864

**Planogyra asteriscus** Morse 1857, Proc. Boston Soc. Nat. Hist., vol. 6, p. 128.

*References.* Binney, W. G., 1885, p. 187; Dall, 1905a, p. 51; Baker, H. B., 1928, p. 122; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 67; Pilsbry, 1948, p. 1038.

*Type Locality.* Bethel, Maine.

*Range.* Maine, Quebec, Prince Edward Island, Newfoundland, and Ontario, south to Massachusetts and New York.

*Remarks.* The British Columbia and Washington records are thought to be erroneous.

**Planogyra clappi** Pilsbry 1898, Nautilus, vol. 11, p. 133.

*References.* Taylor, G. W., 1899, p. 202; Dall, 1905a, p. 53; Henderson, 1929, p. 116; Pilsbry, 1948, p. 1040.

*Type Locality.* Seattle, Washington.

*Range.* British Columbia, Washington, and Oregon.

#### Genus *Zoögenetes* Morse 1864

**Zoögenetes harpa** Say 1824, Rept. Long's Exped., vol. 2, p. 256, pl. 15, fig. 1.

*References.* Packard, 1863, p. 417; Binney, W. G., 1885, p. 185; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 72; Pilsbry, 1948, p. 1043.

*Type Locality.* "Northwest Territory."

*Range.* Newfoundland, Prince Edward Island, and Maine west to Manitoba and Alaska, south to Colorado in the west and Massachusetts in the east. Siberia and Northern Europe.



## Family CIONELLIDAE

Genus *Cionella* Jeffreys 1829

***Cionella lubrica*** Müller 1774, Verm. Terr. et Fluv. Hist., vol. 1, p. 104.

*References.* Packard, 1867, p. 290; Latchford, 1884, p. 1052; Binney, W. G., 1885, p. 194; Taylor, G. W., 1889, p. 93; Hanham, 1890, p. 114; Taylor and Latchford, 1890, p. 58; Taylor, G. W., 1895a, p. 60; Hanham, 1897, p. 102; Letson, 1909, p. 241; Mozley, 1928a, p. 15; Goodrich, 1933, p. 8; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 73; Pilsbry, 1948, p. 1047; Robertson and Blakeslee, 1948, p. 47.

*Type Locality.* Denmark.

*Range.* Alaska, British Columbia, Alberta, Manitoba, Ontario, Quebec, Prince Edward Island, Newfoundland, south to Washington, D. C., southern Missouri, and Mexico; not in California. Pleistocene of Iowa (Yarmouth interglacial).

***Cionella lubrica morseana*** Doherty 1878, Quart. Jour. of Conch., vol. 1, p. 342.

*References.* Oughton, 1948, p. 73; Pilsbry, 1948, p. 1049; Robertson and Blakeslee, 1948, p. 47.

*Type Locality.* "Kenton County, Kentucky, and Hamilton County, Ohio . . ."

*Range.* Michigan, New York, Ohio, Kentucky, Tennessee, Virginia, North Carolina, and Alabama.

*Remarks.* Pilsbry thinks the large form recorded by Latchford (recorded in Hanham, 1897, p. 102) may belong to this subspecies.

## Order Basommatophora

## Family CARYCHIIDAE

Genus *Carychium* Müller 1774

***Carychium exiguum*** Say 1822, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 375.

*References.* Taylor, G. W., 1889, p. 94; Taylor and Latchford, 1890, p. 58; Hanham, 1890, p. 115; Taylor, G. W., 1895a, p. 60; Hanham, 1897, p. 102; Dall, 1905a, p. 116; Clapp, 1906, p. 139; Brooks and Brooks, 1940, p. 75; Oughton, 1948, p. 77; Pilsbry, 1948, p. 1052; Robertson and Blakeslee, 1948, p. 50.

*Type Locality.* "Harrigate, Philadelphia."

*Range.* Newfoundland, Prince Edward Island, New Brunswick, Nova Scotia, Ontario, Quebec, Manitoba, and British Columbia, south to Florida and New Mexico.

***Carychium exile exile*** H. C. Lea 1842, Amer. Jour. Sci., 1st ser., vol. 42, p. 109.

*References.* Leslie, 1891, p. 114; Dall, 1905a, p. 116; La Rocque, 1935a, p. 34; Pilsbry, 1948, p. 1058; Robertson and Blakeslee, 1948, p. 50.

*Type Locality.* Wissahickon Creek near Philadelphia, Pennsylvania.

*Range.* Maine, Quebec, Ontario, Manitoba, south to Alabama and Texas.



**Carychium exile canadense** Clapp 1906, Nautilus, vol. 19, p. 139.

*References.* Lermond, 1909, p. 257; La Rocque, 1935a, p. 34; Oughton, 1948, p. 78; Pilsbry, 1948, p. 1059; Robertson and Blakeslee, 1948, p. 50.

*Type Locality.* Kennebunkport, Maine.

*Range.* Maine, Quebec, Ontario, Manitoba, British Columbia, Michigan, Minnesota.

**Carychium nannodes** Clapp 1905, Nautilus, vol. 19, p. 91.

*References.* Oughton, 1948, p. 79; Pilsbry, 1948, p. 1055.

*Type Locality.* Monte Sano, Madison County, Alabama.

*Range.* Ontario; Alabama and West Virginia.

**Carychium occidentale** Pilsbry 1891, Nautilus, vol. 4, p. 109.

*References.* Henderson, 1929, p. 121; Pilsbry, 1948, p. 1060.

*Type Locality.* Portland, Oregon.

*Range.* British Columbia to California.

*Synonym.* *Carychium magnificum* Hanna.

## Class CEPHALOPODA

### Order Decapoda

#### Family SEPIOLIDAE

#### Genus *Rossia* Owen 1828

**Rossia glaucopis** Lovén 1845, Öfversigt Kgl. Svensk. Vet. Akad. Förh., 1845, p. 121.

*Reference.* Posselt, 1898, p. 275.

*Type Locality.* Europe.

*Range.* Greenland; north of Shetland Islands; Spitsbergen; Norway.

**Rossia hyatti** Verrill 1878, Amer. Jour. Sci., vol. 16, p. 208.

*References.* Verrill, 1882a, p. 377; Posselt, 1898, p. 276; Whiteaves, 1901a, p. 211; Johnson, 1934, p. 160.

*Type Locality.* Not specified: "Massachusetts Bay, . . . off Cape Sable, Nova Scotia, . . . off Halifax" (Verrill).

*Range.* Newfoundland to Massachusetts, 7 to 317 fms. Greenland.

**Rossia megaptera** Verrill 1881, Trans. Conn. Acad., vol. 5, p. 349.

*References.* Verrill, 1882a, p. 383; Posselt, 1898, p. 277; Johnson, 1934, p. 160.

*Type Locality.* Southern coast of Newfoundland, 150 fms.

*Range.* Newfoundland to Massachusetts, 150 to 640 fms. Greenland.

*Synonym.* *Rossia macrosoma* Della Chiaje?

**Rossia mölleri** Steenstrup 1856, Hectocotyldannelser, K. Dansk. Vidensk. Selsk. Skr., p. 198.

*Reference.* Posselt, 1898, p. 273.

*Type Locality.* Greenland.

*Range.* West Greenland; Jan Mayen; Kara Sea; Norway?

**Rossia pacifica** Berry 1911, Proc. U. S. Nat. Mus., vol. 40, p. 591.

*Reference.* Berry, S. S., 1912, p. 290.

*Type Locality.* Albatross Station 4233, Behm Canal, Alaska, 39 to 45 fms.

*Range.* Alaska to California.

**Rossia palpebrosa** Owen 1835, Ross' Second Voyage, App., p. 92, pl. B, fig. 1, pl. C.

*Reference.* Posselt, 1898, p. 271.

*Type Locality.* Elwin Bay, Prince Regent's Inlet, Arctic Canada.

*Range.* West Greenland, 80° 3' N., 8° 28' W., 260 fms. Kara Sea.

**Rossia sublaevis** Verrill 1878, Amer. Jour. Sci., vol. 16, p. 209.

*References.* Verrill, 1882a, p. 380; Posselt, 1898, p. 274; Whiteaves, 1901a, p. 211; Johnson, 1934, p. 160.

*Type Locality.* Massachusetts Bay.

*Range.* Newfoundland south to N. 32° 33' 15'', 45 to 640 fms. Greenland.

#### Genus *Semirossia* Steenstrup 1887

**Semirossia tenera** Verrill 1880, Amer. Jour. Sci., vol. 20, p. 392.

*References.* Verrill, 1882a, p. 385; Whiteaves, 1901a, p. 212; Johnson, 1934, p. 161.

*Type Locality.* Not specified: ". . . all stations from 865 to 880, inclusive." i.e. "Outer banks off Southern New England."

*Range.* Nova Scotia to South Carolina, 18 to 317 fms.

#### Genus *Stoloteuthis* Verrill 1881

**Stoloteuthis leucoptera** Verrill 1878, Amer. Jour. Sci., vol. 16, p. 378.

*References.* Verrill, 1882a, p. 375; Johnson, 1934, p. 161.

*Type Locality.* Gulf of Maine, 30 miles east of Cape Ann.

*Range.* New England, 94 to 640 fms.

#### Family LOLIGINIDAE

##### Genus *Loligo* Lamarck 1798

**Loligo opalescens** Berry 1911, Proc. U. S. Nat. Mus., vol. 40, p. 591.

*Reference.* Berry, S. S., 1912, p. 294.

*Type Locality.* Puget Sound, Washington.

*Range.* Puget Sound to California.

**Loligo pealeii pealeii** Le Sueur 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 92.

*References.* Verrill, 1882a, p. 342; Hoyle, 1885, pp. 222-236; Drew, 1919, pp. 379-435; Johnson, 1934, p. 161; Stevenson, 1934, pp. 4-7.

*Type Locality.* "Coast of South Carolina?"

*Range.* Bay of Fundy to Florida.

**Loligo pealeii borealis** Verrill 1880, Amer. Jour. Sci., vol. 19, p. 292.

*References.* Verrill, 1882a, pp. 342, 349; Johnson, 1934, p. 161.

*Type Locality.* Annisquam, Massachusetts.

*Range.* North of Cape Cod.

*Remarks.* According to Johnson (1934), the status of this subspecies is uncertain.

#### Family ARCHITEUTHIDAE

##### Genus *Architeuthis* Steenstrup 1857

**Architeuthis harveyi** Kent 1874, Proc. Zool. Soc. London, 1874, p. 178.

*References.* Verrill, 1882a, pp. 233, 429; Johnson, 1934, p. 161.

*Type Locality.* Newfoundland Banks.

*Range.* Known only from the type locality.

**Architeuthis princeps** Verrill 1875, Amer. Jour. Sci., vol. 9, pp. 124, 181.

*References.* Verrill, 1882a, pp. 251, 431; Johnson, 1934, p. 161.

*Type Locality.* Newfoundland Banks.

*Range.* Newfoundland Banks, possibly to Massachusetts.

#### Family GONATIDAE

##### Genus *Gonatus* Gray 1849

**Gonatus fabricii** (Lichtenstein 1818) Steenstrup 1880, Sepien mit Krallen, p. 13.

*References.* Verrill, 1882a, pp. 289, 416; Hoyle, 1889, pp. 117-135; Posselt, 1898, p. 279; Whiteaves, 1901a, p. 210; Berry, S. S., 1912, p. 308; Johnson, 1934, p. 161.

*Type Locality.* Not specified.

*Range.* Davis Straits to Rhode Island; Greenland; Iceland; Norway; France; Cape of Good Hope; on the west coast of North America south to Vancouver Island ?, British Columbia, Puget Sound ?, California, and Lower California.

#### Family ONYCHOTEUTHIDAE

##### Genus *Onychoteuthis* Lichtenstein 1818

**Onychoteuthis fusiformis** Gabb 1862, Proc. Calif. Acad. Sci., vol. 2, p. 171.

*Reference.* Berry, S. S., 1912, p. 313.

*Type Locality.* Off Cape Horn?

*Range.* Oak Bay, British Columbia, and San Clemente Island, California; both records doubtful.

Genus *Moroteuthis* Verrill 1881

**Moroteuthis robusta** (Dall) Verrill 1876, Amer. Jour. Sci., vol. 12, p. 236.

*Reference.* Verrill, 1882a, p. 275.

*Type Locality.* Near Iliuliuk, Unalaska Island, Alaska.

*Range.* Unalaska, Alaska, cast up on the beach.

## Family HISTIOTEUTHIDAE

Genus *Histioteuthis* d'Orbigny 1839

**Histioteuthis bonelliana** Férussac 1835, Mag. de Zoöl., ann. V, cl. 5, p. 66.

*References.* Verrill, 1882a, pp. 331, 426; Whiteaves, 1901a, p. 209; Johnson, 1934, p. 162.

*Type Locality.* Mediterranean region.

*Range.* Off Nova Scotia and New England; Mediterranean.

*Synonym.* *H. collinsii* Verrill 1879.

## Family OMMATOSTREPHIDAE

Genus *Ommatostrephes* d'Orbigny 1835

**Ommatostrephes sagittatus** Lamarek 1799, Mém. Soc. Hist. Nat. Paris, vol. 1, p. 13.

*References.* Whiteaves, 1901a, p. 211; Berry, S. S., 1912, p. 298.

*Type Locality.* Europe.

*Range.* Atlantic Ocean; Scandinavian, Lusitanian, and Mediterranean regions. Victoria, British Columbia (doubtful).

Genus *Illex* Steenstrup 1880

**Illex illecebrosus** Le Sueur 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 95.

*References.* Burnett, 1852, pp. 252-253; Verrill, 1882a, pp. 293, 412; Posselt, 1898, p. 279; Ami, 1900, p. 35; Whiteaves, 1901a, p. 210; Ortmann, 1903, pp. 30-31; Johnson, 1934, p. 163.

*Type Locality.* "Sandy Bay" i.e. Grand Banks of Newfoundland.

*Range.* Greenland to Cape Hatteras, 0 to 263 fms.

Genus *Sthenoteuthis* Verrill 1880

**Sthenoteuthis bartramii** Le Sueur 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 90.

*References.* Verrill, 1882a, p. 322; Berry, S. S., 1912, p. 298.

*Type Locality.* None given.

*Range.* Off Komandorski Island, Bering Sea. Europe West Indies.

**Sthenoteuthis pteropus** Steenstrup 1856, Vid. Meddel. Nat. Foren. Kjöbenhavn (1855), p. 117.

*References.* Steenstrup, 1862, pp. 284-285; Verrill, 1882a, p. 317; Johnson, 1934, p. 163.

*Type Locality.* Not ascertained.

*Range.* Nova Scotia to West Indies; North Atlantic.

#### Family CHIOTEUTHIDAE

Genus *Chiroteuthis* d'Orbigny 1839

**Chiroteuthis lacertosa** Verrill 1881, Trans. Conn. Acad., vol. 5, p. 299.

*References.* Verrill, 1882a, p. 419; Whiteaves, 1901a, p. 210; Johnson, 1934, p. 163.

*Type Locality.* Brown's Bank, off Nova Scotia; from stomach of a cod.

*Range.* Nova Scotia to the West Indies, 435 to 2,369 fms.

Genus *Mastigoteuthis* Verrill 1881

**Mastigoteuthis agassizii** Verrill 1881, Bull. Mus. Comp. Zool., vol. 8, p. 100.

*References.* Verrill, 1882a, p. 325; Johnson, 1934, p. 163.

*Type Locality.* Stations 325 and 328, East Coast of the United States.

*Range.* Gulf of Maine to North Carolina; 640 to 1,050 fms.

#### Family CRANCHIIDAE

Genus *Taonius* Steenstrup 1861

**Taonius pavo** Le Sueur 1821, Jour. Acad. Nat. Sci. Phila., vol. 2, p. 96.

*References.* Verrill, 1882a, p. 340; Johnson, 1934, p. 163.

*Type Locality.* "Sandy Bay."

*Range.* Newfoundland to Gulf Stream; Madeira; Japan, etc.

Genus *Verrilliteuthis* Berry 1912

**Verrilliteuthis hyperborea** Steenstrup 1856, Kgl. Dansk. Vidensk. Selsk. Skr., vol. 4, p. 200; separate copies, p. 16.

*References.* Verrill, 1882a, p. 336; Posselt, 1898, p. 282; Johnson 1934, p. 164.

*Type Locality.* Greenland.

*Range.* Greenland to Massachusetts, 0 to 1,346 fms.; northeastern Atlantic.

#### Order Octopoda

#### Family CIRROTEUTHIDAE

Genus *Cirroteuthis* Eschricht 1838

**Cirroteuthis mülleri** Eschricht 1836, Nova Acta Acad. Caes. Leop. Carol., vol. 18, p. 627.

*Reference.* Posselt, 1898, p. 269.

*Type Locality.* Greenland.

*Range.* West Greenland: 72° 36' N. latitude, 5° 12' W. longitude, 1,280 fms.

Genus *Stauroteuthis* Verrill 1879

**Stauroteuthis syrtensis** Verrill 1879, Amer. Jour. Sci., vol. 18, p. 468.

*References.* Verrill, 1882a, p. 406; Whiteaves, 1901a, p. 213; Johnson, 1934, p. 164.

*Type Locality.* N. lat.  $43^{\circ} 54'$ , W. long.,  $58^{\circ} 44'$ , on Banquereau, about 30 miles east of Sable Island, Nova Scotia; 250 fms.

*Range.* Nova Scotia to Long Island; 250 to 1,346 fms.

Genus *Chunioteuthis* Grimpe 1916

**Chunioteuthis ebersbachii** Grimpe 1916, Zoöl. Anzeiger, vol. 46, pp. 349-359.

*Reference.* Johnson, 1934, p. 164.

*Type Locality.* South of Newfoundland, 1,100 m.

*Range.* Known only from the type locality.

## Family OCTOPODIDAE

Genus *Octopus* Lamarck 1798

**Octopus gilbertianus** Berry 1912, Bull. U. S. Bur. Fisheries, vol. 30, p. 284.

*Type Locality.* Albatross Station 4228, vicinity of Naha Bay, Behm Canal, Alaska.

*Range.* Behm Canal and Stephens Passage, southeastern Alaska.

**Octopus hongkongensis** Hoyle 1885, Ann. Mag. Nat. Hist., ser. 5, vol. 15, p. 224.

*Reference.* Berry, S. S., 1912, p. 280.

*Type Locality.* 345 fms. off Ino Sima Island, Japan.

*Range.* Alaska to Lower California. Siberia, Japan, China.

**Octopus leioderma** Berry 1911, Proc. U. S. Nat. Mus., vol. 40, p. 590.

*Reference.* Berry, S. S., 1912, p. 280.

*Type Locality.* Shelikof Strait, Alaska, Albatross Station 4293; 106 to 112 fms.

*Range.* Alaska to California, in rather deep water.

**Octopus piscatorum** Verrill 1879, Amer. Jour. Sci., vol. 18, p. 470.

*References.* Verrill, 1882a, p. 404; Whiteaves, 1901a, p. 212; Robson, 1927, p. 254; Johnson, 1934, p. 165.

*Type Locality.* Off La Have, Nova Scotia.

*Range.* Newfoundland to Massachusetts, 120 to 1,362 fms. Also eastern Atlantic.



Genus *Bathypolypus* Grimpe 1921

**Bathypolypus arcticus** Prosch 1849, Kgl. D. Vidensk. Selsk. Skr., ser. 5, vol. 1, p. 53.

*References.* Posselt, 1898, p. 269; Whiteaves, 1901a, p. 212; Robson, 1927, p. 251; Johnson, 1934, p. 165.

*Type Locality.* Greenland.

*Range.* Bay of Fundy to N. 32 degrees, 28 to 843 fms. Greenland. Northeastern Atlantic.

**Bathypolypus lentus** Verrill 1880, Amer. Jour. Sci., vol. 19, p. 138.

*References.* Verrill, 1881b, p. 375; Whiteaves, 1901a, p. 213; Johnson, 1934, p. 165.

*Type Locality.* Off Nova Scotia, near La Have Bank, in 120 fms.

*Range.* Newfoundland to South Carolina, 120 to 603 fms. Also North Atlantic.

**Bathypolypus obesus** Verrill 1880, Amer. Jour. Sci., vol. 19, p. 137.

*References.* Verrill, 1881b, p. 379; Whiteaves, 1901a, p. 213; Johnson, 1934, p. 165.

*Type Locality.* East of Sable Island, Nova Scotia.

*Range.* Off Nova Scotia, 160 to 300 fms.

Genus *Graneledone* Joubin 1918

**Graneledone verrucosa** Verrill 1881, Bull. Mus. Comp. Zool., vol. 8, p. 105.

*References.* Verrill, 1882a, p. 393; Berry, S. S., 1917, pp. 2-6; Joubin, 1918, pp. 1-11; Johnson, 1934, p. 165.

*Type Locality.* West Atlantic, not specified.

*Range.* Nova Scotia to Delaware Bay, 466 to 1,255 fms.

*Remarks.* The species was based on two specimens from the west Atlantic, taken by Agassiz in the "Blake". The two localities are given exactly, but so far as I know neither one has been designated as the type locality and there seems to be little need for doing so.

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